Mickledore
Solutions in regional development

Sector Reports - Cheshire and Warrington

Report to The Mersey Dee Alliance / Cheshire LEP

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Mickledore Ltd
Unit 2
Chapel House Barn
Pillmoss Lane
Lower Whitley
Cheshire
WA4 4DW
Tel: +44 (0)1925 837679
Limited Company No. 6651481

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Introduction

This report sets out a sector analysis of the Cheshire and Warrington economy. It has been undertaken as part of a piece of work to understand the sectors which are important across the whole of Cheshire, Warrington and North Wales and has also involved the completion of sector propositions for UK Trade and Investment (UKTI) in order to present Cheshire, Warrington and North Wales in a favourable light. The work sets out a body of economic evidence from a spatial and sector based perspective before drawing conclusions. Whilst the report does make these conclusions, it is the intention that the economic data which underpins the report will be as important to shaping future economic policy as the conclusions drawn. This is because the evidence will allow informed policy making.

Findings

The Cheshire and Warrington economy is nationally significant. When Gross Value Added (GVA) is considered, Cheshire and Warrington[1] has an output equivalent to half the output of Wales. It may also surprise many that the activity making the largest contribution to economic output is production. For all the wide variety sectors represented across the area, Cheshire and Warrington remains an important manufacturing economy with a higher proportion of output gained from manufacturing than Merseyside, Greater Manchester or Lancashire.

The over-riding output of this report is to set out the sector characteristics of the entire area but in doing so, it is worth considering that in a £21bn economy identification of sector strengths as though they are homogenous across the whole of the area can sometimes dilute the importance of particular concentrations of activity such as pharmaceuticals in Cheshire East; nuclear in Warrington; and financial services in Chester. It is recommended that in the work of the Cheshire and Warrington LEP some of these local area specialisms continue to be recognised in order to make the strongest case for the area.

The sectors which are both strong from an employment and output perspective in absolute and relative terms are set out in the table below. This necessarily simplifies an economy in which over 1,000 registered companies record a turnover of greater than £1m and operate in virtually every sector of the economy but it does provide a framework against which future economic development decisions can be taken.

Employment and location quotients for key Cheshire and Warrington sectors (BRES, 2011)

	Cheshire East	Cheshire West & Chester	Warrington	Total Cheshire & Warrington	LQ
Key Sectors					
29 : Manufacture of motor vehicles, trailers and semi-trailers	*	*	*	7,000	3.29
64 : Financial service activities, except insurance and pension funding	3,900	8,800	1,400	14,000	1.72
Chemicals, petrochemicals and minerals	1,500	4200	1,000	6,300	2.38
21 : Manufacture of basic pharmaceutical products and pharmaceutical preparations	*	*	*	2,000	2.98
72 : Scientific research and development	*	*	*	4,200	2.14
71 : Architectural and engineering activities; technical testing and analysis	3,000	2,200	4,700	9,900	1.65
Other Important Sectors					
35 : Electricity, gas, steam and air conditioning supply	1,333	100	600	2,000	1.23
10 : Manufacture of food products	2,305	2,100	1,100	5,500	1.05
17 : Manufacture of paper and paper products	731	200	-	1,000	1.27

*data suppression to protect confidential survey based information

The report arrives at a number of conclusions concerning these sectors:

[1] ONS figures for GVA only allow the Cheshire and Warrington GVA figures to include the output of Halton. As a result the GVA figures contained in this report inflate the actual GVA figures somewhat but do give an indication of sectors and scale.

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Automotive

Automotive is the sector that has the highest relative strength in terms of employment concentration and is an important sector for the LEP area. Employment in the sector is dominated by Bentley Motors and to a lesser extent Vauxhall Motors. There is little evidence of an extensive automotive supply chain in the area and the relative paucity of suppliers is somewhat surprising given a legacy in the industry (previously a location for commercial vehicle manufacturing) and a location between many of the major UK assembly plants. Inward investment in automotive component supply is not as plentiful as it once was but there does seem to be opportunities to attract some investment into this sector as UK based assembly operations introduce new models and supplier opportunities.

Financial and business services

The most important employer of all the sectors in absolute terms is financial services. This sector is particularly strong in Chester but there are other important players spread across the LEP area. Changes in this industry are likely to continue to generate opportunities for new investment projects despite the difficult financial services environment – for example new banking entrants; mobile payment technology; and consolidation in the legal sector. Cheshire and Warrington has an opportunity to benefit from some of this investment if pro-active activity within the sector and in particular with existing investors is undertaken.

The related business services sector is under-represented in Cheshire and Warrington despite this sector generating the largest number of inward investment projects over the last decade of any sector. Mobile business services projects continue to seek virgin locations distant from competitors and given the relative lack of such investment they represent an opportunity for Cheshire and Warrington. These projects have the added benefit of tending to locate in town / city centres at the confluence of transport routes and can therefore help play a regenerative role adding to retail footfall and supporting an early evening leisure economy.

Chemicals

Chemicals, petrochemicals and minerals is the sector on which much of the Cheshire and Warrington economy was founded and it remains an important employer. Environmental, legislative, cost and land planning pressures have meant that chemicals has been something of a Cinderella industry from an economic development and investor support perspective but attempts to retain current investors; secure follow on investment; and look for additional angles for investment are considered important to sustain the industry and ensure that this large scale sector for the economy does not diminish. The investment in key Cheshire and Warrington based companies in the sector by Indian companies may create new opportunities for growth after a decade of cost reduction and managing decline. Initial indications suggest that their acquisitions will be under-pinned by follow on investment. Clear and supportive policies relating to land use and planning are likely to be two key aspects to a range of potential public sector interventions. Whether such interventions can be linked to investments taken by the companies in more sustainable investment decisions could represent an interesting aspect of future policy.

Pharmaceuticals

The large scale employment figures for both pharmaceutical manufacture as well as scientific development in Cheshire and Warrington are linked. Employment in scientific development is mostly linked to the pharmaceutical sector. Astra Zeneca can be regarded as one of the top 5 business operations in Cheshire and Warrington and some may regard the business as the single most important business in the area. Whilst pharmaceuticals and R&D is not a one company sector in Cheshire and Warrington, the depth of the sector beyond Astra Zeneca is somewhat limited. Certainly without Astra Zeneca the sector could not be considered as one of the most important sectors for the Cheshire and Warrington economy.

Astra Zeneca is currently challenged in terms of product pipeline and cost base. Whilst this represents a difficult situation for the Company and its employees, other locations have worked to create sub-contract businesses for pharmaceutical sites which can reduce the overhead of the prime whilst developing new businesses which can then go on to compete for additional business away from the original location. This may represent an opportunity borne out of a difficult situation.

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Engineering

Engineering is one of the most important businesses in Cheshire and Warrington. Civil, mechanical, electrical, electronic and chemical engineering skills present across the manufacturing, construction and utilities sectors are matched by a complementary concentration of consulting engineering businesses. These support the manufacturing and energy sectors as well as supporting investment in infra-structure not only across the region or the UK but also with a thriving export element.

This report finds that the cross sector basis of this employment has resulted in the activity being under-reported and under-valued by organisations such as UKTI who have taken a strict sector approach. Given the energy and infrastructure requirements of the UK (and wider afield) there is an opportunity if Cheshire and Warrington can gain appropriate recognition for a nationally important concentration of activity. If this activity is to be sustained and represent a growing export sector there is a need for further skills development not only nationally but also focused on the current businesses in the area to ensure that available engineers keep pace with demand.

The strength in engineering activity in Cheshire and Warrington is the principal reason why the area can be at the forefront of the utilities sector - which is currently at least regionally significant (United Utilities and Electricity North West); and the energy sector where Cheshire and Warrington is already nationally significant in terms of nuclear new build and decommissioning.

Food

Cheshire and Warrington has historically been synonymous with agriculture, dairy and to some extent food production. The sector however, whilst continuing to employ a large number of people, no longer significantly outperforms other areas of the UK in terms of the proportion of people employed. Furthermore, Cheshire and Warrington is not a base for many internationally significant employers. Given that many food operations are lower value employers; that Cheshire and Warrington does not employ a disproportionate number of people in the sector; and that neighbouring areas have higher proportions of employees involved, the industry in Cheshire and Warrington should be considered as an important employer rather one of the most important sectors for economic output. Given the current position of the industry we do not consider that food is likely to represent a future catalyst for growth.

Notwithstanding this, locally sourced products and niche businesses continue to generate individual company opportunities which can sustain employment. Provenance, quality ingredients and growth in the higher value aspects of the food business are areas in which Cheshire can gain further investment. Adjacent Shropshire may represent the best UK case study of such an approach.

Packaging and secondary manufacturing

The large scale activity in manufacturing, the concentration in particular on food and pharmaceuticals and the residual strengths in paper and plastics have created a very significant concentration of paper and packaging companies. This is not an area typically associated with economic or investor development intervention but is nevertheless important to the area. Whilst it is difficult to create a strategy to intervene in this type of secondary industry, one aspect for consideration is land use and future general industrial planning classifications which underpin the general manufacturing strengths of the area.

Knowledge Resources

Behind the sector trends and the investment opportunities, it is important to consider the resilience of sectors and the role of the knowledge resources to ensure that the sectors can generate a value added activity to protect and potentially expand current activity. Linkages into an innovation chain can be essential for a business and is one way in which branch plants controlled by a distant headquarters can start to put down roots in an area that are more difficult to break.

Overall, the finding of this project is that businesses are not automatically collaborating with existing knowledge resources. Businesses in Cheshire and Warrington have world class collaborative opportunities in close proximity which could add tremendous value to products and processes. In particular the Universities of Manchester; Liverpool and Daresbury Laboratories offer a wide range of opportunities. It is somewhat irrelevant that this resource is just outside the geographic area, more important is the natural pre-disposition to collaborate. More is required through pro-active engagement with business if more is to be made of this resource.

The University of Chester and other niche knowledge resources in Cheshire and Warrington could add to this critical mass of collaborative resource although there is currently something of a mismatch between capability and local sector strengths.

Recommendations

Whilst this project was not commissioned to lead directly to an action plan and the views of the Cheshire and Warrington Local Enterprise Partnership will formulate any policy approach, we introduce ten recommendations for consideration which lead directly from the findings of this report:

1. Cheshire and Warrington is a significant economic area and with both a strong productive industrial base and strengths in financial services is a more balanced economy than many other locations in the UK. Many of the key messages about Cheshire and Warrington have focused on the lifestyle aspects of the area and the important economic story has been undersold. If the area is to thrive, there is a need to ensure that the economic messages concerning Cheshire and Warrington are presented more prominently.

2. One of the most important sectors for Cheshire and Warrington is engineering – civil, electrical, mechanical, and chemical engineering linked into the core industries. There is also a concentration of consulting engineering businesses perhaps originally attracted by regional opportunities but now successfully working on national and international projects. The nationally significant and pan-sector strengths of engineering is lost within the current sector definitions of UKTI; and nor has it historically been prominent in sector material concerning the region. National and international investment in energy and infra-structure projects represent a very large opportunity for a hidden strength of the economy and more needs to be done to ensure appropriate recognition is gained for this important area of the economy.

3. In order to be successful in inward investment and investor development, there is no substitute to forming strong relationships with companies already represented within the area. Recent changes in the public sector have had a disruptive effect on business engagement activity. Business engagement may be about ensuring that risks of disinvestment are reduced (solving skills, property, research, planning and transport issues etc); facilitating re-investment (working on business cases with local management; providing access to finance; expansion space; recruitment; supply chain work; internationalisation; and other introductions); or using existing investors to make the case for the area with their suppliers and customers or within their wider Group. All of this activity is time consuming and only works if there is a systematic, skilled and well-resourced approach to business engagement.

4. There are a large number of manufacturing businesses in Cheshire and Warrington. The pace of change means that their processes and products will continue to be re-engineered and some of these changes will create a need for new premises. Declining employment in manufacturing has resulted in less and less allocation of land for manufacturing employment use (with a shift towards more residential use) and there is a risk that continued reallocation of land means that further declines in manufacturing employment is becoming a self-fulfilling prophecy. It is unlikely that there is a large amount of pent up demand for manufacturing space but there is a need to ensure that Cheshire and Warrington has sufficient allocated manufacturing land for existing companies to expand; re-engineer their operations; as well as for the area to attract new companies. An emerging risk is that in adjacent North Wales and Staffordshire there is now a strong supply of manufacturing land in many cases controlled by the public sector.

5. The business services; outsourcing; and software sectors are under-strength in Cheshire and Warrington. This is perhaps surprising because these sectors have been the powerhouse behind the UK's leading position in the attraction of inward investment over the last 10 years. On the face of it, Cheshire and Warrington has a compelling message to offer the sector with its large population catchment area; managerial and professional skills base; access to graduates; competitive salaries and other operating costs against national comparators; as well as national and international transport connectivity allowing access to other Group operations and potential customers. Over the last decade however, these businesses have increasingly focused their location

searches on city / town centres since it is these locations which are at the confluence of transport links maximising population catchment. These users typically require modern and open plan office space. Cheshire and Warrington requires more town centre office space – but this in turn can help revitalise retail footfall and early evening leisure activity within these towns.

6. Apart from in the business services sector, where there continues to be a strong flow of genuinely mobile potential inward investment projects, inward investment is increasingly difficult to attract. Inward investment is more likely to arrive as a result of company, supplier or customer linkages that are already in place within the region than as a result of a speculative overseas promotional campaign. An inward investment strategy is therefore more likely to be successful when built around these businesses. The Indian influence in the chemical industry is an important trend that should be explored with the companies involved with the potential for closer links; the Bentley supply chain initiative; investments supporting nuclear new build and decommissioning; and infra-structure engineering opportunities relating to smart grid or offshore wind are just a few examples in which Cheshire and Warrington based companies can identify / introduce further potential investment into the LEP area. These companies represent the most important 'multiplier' network.

7. Investment in the financial and professional services sector will not cease despite the current downturn in activity and bad publicity. Innovations in mobile payments; new entrants into the banking sector; likely consolidation and emergence of large scale players in the consumer legal sector; continued pension legislation; and insurance for elderly care are just some of the drivers that will generate new investments. With financial skills and links into existing players across Cheshire and Warrington especially in Chester, now is not the time to draw a line under financial services. This is an area of differentiation and at a time when others are reconsidering their position, Cheshire and Warrington can stand out as an attractive location for the sector.

8. Astra Zeneca is certainly one of the top 5 most important company investments in Cheshire and Warrington and may be the most significant. The Company is currently in a period of reorganisation and it is unlikely that the Company will look the same in five years' time as it does today. One area of focus is on overhead and research costs. There are good examples of locations where companies (supported by public agencies) have spun-out non-core support activities within their business. Such an activity has allowed the existing company to reduce site costs whilst at the same time growing new businesses which can grow by serving other similar sites. It is understood that such discussions may have already commenced and there may be the opportunity to broaden the company base around Astra Zeneca (the changes to Pharmacia Upjohn in Uppsala, Sweden offer a blue print for this type of diversification / spin-out activity).

9. There appears to be a lack of a clear linkage between the companies that make up the core sectors of Cheshire and Warrington and the available knowledge resource. Perhaps the most significant resources for companies based in Cheshire and Warrington can be considered to be Daresbury Laboratories; the University of Manchester; and the University of Liverpool although there are many other exceptions. The issue is not the availability of knowledge and innovation resource but the natural pre-disposition of companies within the area to automatically approach this resource for support. This finding is probably as true of work to ensure a high quality supply of skilled graduates suitable for employment in the manufacturing industry (and attracted by such a career) as it is for approaching the resource to help solve R&D, product or process issues. To further help address this issue there is an opportunity for greater alignment between the University of Chester and the sectors in the region – there are good examples where the approach taken by newer Universities have brought a more flexible and business relevant approach to collaboration.

10. In terms of sector promotion, our summary recommendations are therefore:

    - Promote Cheshire and Warrington as a location for engineering, energy and business and financial services investment. There are both the differentiated strengths and opportunities to merit this promotion being pro-active and to take place through initiatives outside the region.
    - Work with the automotive, chemicals and pharmaceutical industries to understand the opportunities linked to / presented by existing players. This niche approach recognises that investment from these sectors is likely to be linked to some existing activity already being undertaken in the region.

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It should be re-emphasised that these recommendations are intended to add to the policy debate. The research set out in the report which follows is intended to support others to reach their own policy views.

Introduction

Overview

1.1 This report reviews the performance of the principal sectors which comprise the Cheshire and Warrington economy. Given that no one indicator can provide a comprehensive insight into the strength of an industry, the optimum method is to use a number of measures spanning employment contribution, location quotients, largest businesses and overall enterprise stocks, which can be considered in the round to gain a holistic view of the key sectors.

1.2 Such an approach is applied to each of the three districts: Cheshire East, Cheshire West & Chester and Warrington, before bringing this evidence together to provide an overall analysis of the dynamics of sectors for the area as a whole. With a comprehensive understanding of the sector dynamics for the area in place, a commentary will be provided on the industry trends going forward. This will allow an analysis of where the area's strengths align with future opportunities.

1.3 Finally, a review of the area's knowledge capabilities and other key assets will be detailed to understand the role and value of infrastructure in supporting growth across the sector base.

1.4 All the sector analysis presented in this report will be predominantly based on the 2007 Standard Industrial Classifications framework as developed by the Office for National Statistics to capture economic activities, presented at the 2-digit level.

Cheshire East

Sectors by Employment

2.1 The first measure to be explored is the employment contribution of individual sectors. This is based on the Business Register and Employment Survey (BRES) which captures numbers employed by industry. It should be noted that any survey-based approach is subject to limitations, given its reliance on the accuracy with which forms are completed by businesses as well as the sample sizes generated for smaller areas such as local authorities. Despite such caveats, it provides the most up-to-date perspective of the distribution of employment within Cheshire East. Figure 1 below provides an overview of the 30 largest sectors in terms of employment numbers by 2-digit SIC code.

Numbers employed in Cheshire East for the 30 largest sectors by 2-digit SIC code (BRES, 2011)

Industry	Cheshire East	Cheshire East %	Cheshire & Warrington	North West %	MDA Total %	England and Wales %
47 : Retail trade, except of motor vehicles and motorcycles	16700	10.48	10.73	10.67	11.37	10.32
85 : Education	12600	7.91	8.14	9.21	9.51	9.75
86 : Human health activities	11700	7.31	6.90	8.37	9.66	7.28
56 : Food and beverage service activities	7800	4.88	5.50	5.48	5.16	5.33
46 : Wholesale trade, except of motor vehicles and motorcycles	5900	3.69	3.81	3.83	2.88	4.23
88 : Social work activities without accommodation	5200	3.27	2.84	3.57	3.61	3.25
78 : Employment activities	4800	3.00	4.01	2.70	3.23	3.07
87 : Residential care activities	4700	2.98	2.65	2.80	2.97	2.50
84 : Public administration and defence; compulsory social security	4500	2.84	4.30	6.10	5.81	5.71
70 : Activities of head offices; management consultancy activities	4400	2.75	2.40	1.63	1.36	1.96
29 : Manufacture of motor vehicles, trailers and semi-trailers	*	*	1.69	0.57	1.16	0.51
64 : Financial service activities, except insurance and pension funding	3900	2.44	3.38	1.74	2.68	1.97
72 : Scientific research and development	*	*	1.02	0.28	0.27	0.48
45 : Wholesale and retail trade and repair of motor vehicles and motorcycles	3600	2.27	2.28	1.83	1.96	1.74
93 : Sports activities and amusement and recreation activities	3600	2.24	1.62	1.58	1.45	1.51
62 : Computer programming, consultancy and related activities	3500	2.21	1.62	1.05	0.74	1.87
43 : Specialised construction activities	3200	2.02	2.59	2.62	2.65	2.39
69 : Legal and accounting activities	3200	2.00	1.82	2.27	1.63	1.96
49 : Land transport and transport via pipelines	3100	1.97	1.89	1.97	1.59	1.90
71 : Architectural and engineering activities; technical testing and analysis	3000	1.87	2.37	1.48	1.39	1.44
52 : Warehousing and support activities for transportation	2700	1.70	1.47	1.36	0.90	1.36
82 : Office administrative, office support and other business support activities	2600	1.61	1.52	1.28	1.03	1.21
66 : Activities auxiliary to financial services and insurance activities	2400	1.52	1.33	1.17	0.90	1.49
96 : Other personal service activities	2400	1.48	1.35	1.16	1.29	1.08
10 : Manufacture of food products	2300	1.45	1.32	1.64	2.58	1.26
55 : Accommodation	2100	1.34	1.21	1.26	1.30	1.32
21 : Manufacture of basic pharmaceutical products and preparations	*	*	0.47	0.23	0.16	0.16
25 : Manufacture of fabricated metal products, except machinery and equipment	1800	1.15	1.02	1.05	1.06	1.06
68 : Real estate activities	1800	1.15	1.04	1.15	0.98	1.42
81 : Services to buildings and landscape activities	1700	1.10	2.04	2.35	1.20	2.29

2.2 Beyond the typically labour-intensive sectors of retail and public services (i.e. health, education, social services), the five largest industries in Cheshire East in terms of total employment are:

- Activities of head offices and management consultancy,
- Manufacture of motor vehicles
- Financial service activities
- Scientific research & development
- Computer programming and consultancy

Cheshire East *Cont*

2.3 However, absolute figures for employment, and even corresponding percentages, do not illustrate the relative performance of industries in the district. In order to better understand where Cheshire East has a comparative advantage compared to other regions and nationally, Location Quotients are used. LQs present the proportion of employment in each sector within Cheshire East compared to the equivalent percentage at the national level. Thus, scores of over 1.00 indicate a relatively strong representation locally while scores of over 2.00 indicate that double the proportion of employees in Cheshire East work in the sector compared to the position in England and Wales. The table below highlights all those sectors with a score greater than 1.00:

Location Quotients (>1.0) for 2-Digit SIC codes for Cheshire East (BRES, 2011)

Sector	LQ
21 : Manufacture of basic pharmaceutical products and pharmaceutical preparations	7.52
29 : Manufacture of motor vehicles, trailers and semi-trailers	4.88
72 : Scientific research and development	4.78
39 : Remediation activities and other waste management services. This division includes the provision of remediation services, i.e. the cleanup of contaminated buildings and sites, soil, surface or ground water.	3.84
08 : Other mining and quarrying	2.62
17 : Manufacture of paper and paper products	2.38
75 : Veterinary activities	2.32
95 : Repair of computers and personal and household goods	2.23
35 : Electricity, gas, steam and air conditioning supply	2.13
73 : Advertising and market research	1.76
23 : Manufacture of other non-metallic mineral products	1.75
93 : Sports activities and amusement and recreation activities	1.48
70 : Activities of head offices; management consultancy activities	1.40
96 : Other personal service activities	1.37
82 : Office administrative, office support and other business support activities	1.32
45 : Wholesale and retail trade and repair of motor vehicles and motorcycles	1.30
32 : Other manufacturing	1.30
71 : Architectural and engineering activities; technical testing and analysis	1.30
52 : Warehousing and support activities for transportation	1.25
65 : Insurance, reinsurance and pension funding, except compulsory social security	1.24
64 : Financial service activities, except insurance and pension funding	1.24
28 : Manufacture of machinery and equipment n.e.c.	1.21
02 : Forestry and logging	1.21
87 : Residential care activities	1.19
62 : Computer programming, consultancy and related activities	1.18
10 : Manufacture of food products	1.15
20 : Manufacture of chemicals and chemical products	1.10
79 : Travel agency, tour operator and other reservation service and related activities	1.10
25 : Manufacture of fabricated metal products, except machinery and equipment	1.08
33 : Repair and installation of machinery and equipment	1.07
49 : Land transport and transport via pipelines	1.04
69 : Legal and accounting activities	1.02
66 : Activities auxiliary to financial services and insurance activities	1.02
47 : Retail trade, except of motor vehicles and motorcycles	1.02
55 : Accommodation	1.01
37 : Sewerage	1.01
13 : Manufacture of textiles	1.01
88 : Social work activities without accommodation	1.01
86 : Human health activities	1.00

2.4 The table shows that automotive manufacturing and scientific research & development are industries with significant relative strengths as well as a large overall employment base, as shown in Figure 1. Pharmaceuticals, while not the largest industry in absolute jobs, is a sector in which Cheshire East has a notable comparative advantage, with over seven times the proportion of employment compared to England and Wales. Likewise, remediation activities, energy, mining and manufacture of paper products all demonstrate scores of above 2.00, suggesting that these are all areas in which Cheshire East has a leading position nationally.

2.5 Activities of head offices, representing a large employer in absolute terms for Cheshire East, is also a notable relative strength for the district with almost 1.5 times more people in this sector than the national average.

2.6 Despite the large headcount for financial services and computer programming, in relative terms these are only marginally larger than the position within England and Wales. This suggests that Cheshire East does not demonstrate as significant a comparative advantage in these sectors.

Largest Businesses

2.7 The strength of a sector can also be indicated by the presence of major players and large operations. As such, the following table shows the 20 largest companies in terms of turnover, which are registered in Cheshire East:

20 Largest Registered Businesses by Turnover in Cheshire East (Fame, 2012)

Company name	Postcode	Turnover £000s	Employees	Primary UK SIC (2007) description
AMEC PLC	WA16 8QZ	2,950,600	18,610	Construction of commercial buildings
Bentley Motors Limited	CW1 3PL	1,590,900	3,364	Manufacture of motor vehicles
Chicago Beta Limited	CW1 6BU	1,485,498	1,391	Activities of head offices
Marlowe Holdings Limited	WA16 6AF	1,235,318	4,639	Activities of head offices
Edmundson Electrical Limited	WA16 6AY	851,703	3,010	Wholesale of radio and television goods and of electrical household appliances (other than of gramophone records, audio tapes, compact discs and video tapes and the equipment on which these are played
UK Fuels Limited	CW1 6EG	620,918	180	Wholesale of fuels and related products (other than petroleum and petroleum products)
Norwest Foods International Limited	WA16 8XZ	589,083	15	Other business support service activities n.e.c.
Pets At Home Ltd	SK9 3RN	511,576	3,327	Other retail sale of new goods in specialised stores (other than by opticians or commercial art galleries), n.e.c
Bodycote PLC	SK10 2XF	499,800	5,603	Treatment and coating of metals
Four Seasons Health Care Limited	SK9 1NX	478,788	21,184	Other human health activities
NWF Group PLC	CW5 6BP	463,800	929	Activities of other holding companies (not including agricultural, production, construction, distribution and financial services holding companies) n.e.c.
20:20 Mobile (Uk) Limited	CW1 6BU	424,179	562	Other telecommunications activities
Bargain Booze Holdings	CW1 6BP	380,664	229	Activities of head offices
De Poel Holdings Limited	WA16 8RB	298,673	60	Management consultancy activities (other than financial management)
NWF Fuels Limited	CW5 6AF	290,022	137	Wholesale of fuels and related products (other than petroleum and petroleum products)
Seddon Group Limited	CW4 8AF	266,908	1,843	Construction of commercial buildings
Novoferm Europe Limited	SK9 3PW	263,346	1,989	Wholesale of wood, construction materials and sanitary equipment
Elior UK Limited	SK11 6ET	241,750	8,437	Event catering activities
Swansway Group Limited	CW1 6YY	201,396	448	Activities of head offices
The Fayrefield Group Limited	CW1 5UF	200,651	106	Activities of head offices

2.8 There are a number of caveats which are associated with Companies House data. Essentially it provides records for those businesses which have a registered office in Cheshire East, rather than outlining their overall operations in the district. This is exemplified with the largest business AMEC PLC, which has a registered office in Knutsford but clearly does not employ 18,000 people at this site. Furthermore, the nature of corporate structures means that there can be duplication in the House data whereby holding companies and their subsidiaries are recorded despite sharing the same operations.

2.9 Along with these issues, a number of large employers in Cheshire East do not appear in the dataset due to having their registered headquarters outside the authority but have been flagged in consultation with economic development officers. A complete list can be found in the appendix, but several of the key businesses which do not appear in Companies House data are presented below:

- AstraZeneca (Pharmaceuticals)
- Bombardier (Transport)
- Fujitsu Services (IT Services)
- Siemens Standard Drives (Electronic Engineering)
- Air Products and Chemicals (Energy)

2.10 Taking into account both the Companies House data and the reported businesses, many of the largest employers emerge from pharmaceuticals, automotive and civil engineering, food manufacturing sectors as well as activities of head offices. As such, this supports the previous indicators, which suggest key strengths in automotive manufacturing and science, research and development, alongside a relatively strong performance in IT, energy and head office activities.

Enterprise Stocks

2.11 Assessing the overall business stock is a complementary exercise to reviewing the largest businesses in that it gives a comprehensive insight into the nature of the business base for individual sectors. As detailed in the table below, sectors such as computer programming, specialised construction and architectural & engineering are the most abundant in terms of numbers of businesses. These sectors are likely to be characterised by a multitude of smaller enterprises, given their overall absence from the largest businesses list.

2.12 Activities of head offices are well represented by the largest employers and in the overall stock of businesses which points to a relatively resilient sector which is not overly reliant on a handful of very large operators. It also reflects a significant level of executive and managerial activities in Cheshire East which is likely to be an asset to a number of industries. Examples of the activities which some of head offices are responsible for include:

- Marlowe Holdings – distribution of electrical products
- NWF Group – distribution of agricultural products
- De Poel Holdings – employment services
- The Fayrefield Group – food and drink manufacturing

2.13 Conversely, pharmaceutical manufacturing and manufacture of motor vehicles do not appear in the list of sectors with the broadest business base, despite their overall job numbers and high-scoring LQs. This does suggest a degree of vulnerability for both industries as it is highly likely that each sector is strongly reliant on decision making in a few key companies e.g. AstraZeneca, Bentley Motors.

Cheshire East *Cont*

Numbers of Businesses by 2-Digit SIC Code for Cheshire East (ONS)

Sector	Cheshire East	Cheshire East %	North Wales (%)	MDA (%)	Cheshire & Warrington (%)	England and Wales (%)
47 : Retail trade, except of motor vehicles and motorcycles	1,993	11.05	14.04	13.25	11.77	11.50
70 : Activities of head offices; management consultancy activities	1,278	7.09	2.35	4.51	6.53	5.00
62 : Computer programming, consultancy and related activities	1,065	5.90	2.33	3.62	5.37	4.70
46 : Wholesale trade, except of motor vehicles and motorcycles	1,063	5.89	4.47	4.63	5.41	5.10
56 : Food and beverage service activities	1,003	5.56	7.45	6.82	5.85	6.20
43 : Specialised construction activities	966	5.36	7.58	7.02	5.70	7.20
96 : Other personal service activities	730	4.05	3.00	3.54	3.87	3.20
82 : Office administrative, office support and business support activities	716	3.97	2.31	3.04	3.58	3.20
41 : Construction of buildings	690	3.83	3.50	3.23	3.39	3.60
68 : Real estate activities	690	3.83	2.34	2.85	3.45	3.60
71 : Architectural and engineering activities; technical testing and analysis	628	3.48	2.34	3.44	4.22	2.80
45 : Wholesale and retail trade and repair of vehicles and motorcycles	625	3.47	3.80	3.50	3.46	3.10
74 : Other professional, scientific and technical activities	468	2.59	1.52	2.01	2.36	2.40
85 : Education	418	2.32	3.34	3.05	2.59	2.60
69 : Legal and accounting activities	394	2.18	1.56	2.27	2.34	2.70
49 : Land transport and transport via pipelines	380	2.11	2.96	2.40	2.14	2.00
86 : Human health activities	374	2.07	2.31	2.44	2.08	2.10
81 : Services to buildings and landscape activities	332	1.84	2.25	1.96	1.93	2.00
93 : Sports activities and amusement and recreation activities	275	1.52	1.49	1.49	1.42	1.20
64 : Financial service activities, except insurance and pension funding	266	1.47	1.03	1.24	1.43	1.50
88 : Social work activities without accommodation	261	1.45	2.73	2.50	1.74	2.00
73 : Advertising and market research	191	1.06	0.29	0.49	0.85	0.70
78 : Employment activities	176	0.98	0.44	0.79	1.13	1.00
66 : Activities auxiliary to financial services and insurance activities	166	0.92	0.51	0.67	0.81	0.90
77 : Rental and leasing activities	152	0.84	1.07	0.98	1.01	0.80
42 : Civil engineering	151	0.84	1.48	1.13	0.91	1.10
94 : Activities of membership organisations	147	0.81	1.24	1.08	0.83	1.00
25 : Manufacture of fabricated metal products, except machinery	135	0.75	1.10	1.11	0.88	1.10
90 : Creative, arts and entertainment activities	133	0.74	0.60	0.48	0.61	1.20
87 : Residential care activities	130	0.72	1.73	1.36	0.95	1.30

Cheshire East *Cont*

Key Findings

2.14 Through reviewing a series of indicators we can begin to appreciate the sector dynamics within Cheshire East. The main findings in this regard can be summarised as follows:

- Automotive manufacturing and scientific research and development are key sectors both in terms of absolute numbers employed and relative levels of employment compared to the national position. Equally, pharmaceutical manufacture is an area in which Cheshire East holds a comparative advantage and represents one of the largest employers in the district.
- Activities of head offices continue to employ a large number of people in the district and is characterised by a sizeable number of businesses which reflects a significant level of executive and managerial activities in Cheshire East. Furthermore, the percentage of employment is 1.5 times higher than the national average which presents an area of comparative advantage.
- The presence of key large employers such as AstraZeneca and Bentley Motors underpins the relative performance of automotive manufacturing and pharmaceuticals, but it does suggest an element of vulnerability in that the sectors are dependent on a handful of very significant businesses and are not characterised by a wider base of numerous smaller enterprises.
- The high level of enterprises involved in computer programming, architectural and engineering activities and professional and scientific activities reflect the vitality of these industries as highlighted in the location quotients. All these sectors employ a sizeable number of people which is promising baseline for future growth.

Cheshire West & Chester

Sectors by Employment

3.1 The first focus of the analysis will be the employment figures reported within the BRES for sectors in Cheshire West and Chester (CW&C). Figure 1 below provides an overview of the 30 largest sectors in terms of employment numbers by 2-digit SIC code.

Numbers employed in CW&C for the 30 largest sectors by 2-digit SIC code (BRES, 2011)

Industry	Cheshire West and Chester	Cheshire West and Chester %	Cheshire & Warrington %	North West %	MDA Total %	England and Wales %
47 : Retail trade, except of motor vehicles and motorcycles	17300	11.97	10.73	10.67	11.37	10.67
85 : Education	14000	9.73	8.14	9.21	9.51	9.21
86 : Human health activities	9900	6.88	6.90	8.37	9.66	8.37
64 : Financial service activities, except insurance and pension funding	8800	6.10	3.38	1.74	2.68	1.74
56 : Food and beverage service activities	8200	5.70	5.50	5.48	5.16	5.48
84 : Public administration and defence; compulsory social security	6800	4.74	4.30	6.10	5.81	6.10
78 : Employment activities	5300	3.68	4.01	2.70	3.23	2.70
46 : Wholesale trade, except of motor vehicles and motorcycles	4400	3.06	3.81	3.83	2.88	3.83
87 : Residential care activities	3900	2.69	2.65	2.80	2.97	2.80
45 : Wholesale and retail trade & repair of motor vehicles & motorcycles	3700	2.56	2.28	1.83	1.96	1.83
88 : Social work activities without accommodation	3600	2.48	2.84	3.57	3.61	3.57
43 : Specialised construction activities	3200	2.21	2.59	2.62	2.65	2.62
70 : Activities of head offices; management consultancy activities	3000	2.11	2.40	1.63	1.36	1.63
29 : Manufacture of motor vehicles, trailers and semi-trailers	2900	2.03	1.69	0.57	1.16	0.57
20 : Manufacture of chemicals and chemical products	2600	1.78	0.98	0.72	1.42	0.72
69 : Legal and accounting activities	2600	1.78	1.82	2.27	1.63	2.27
66 : Activities auxiliary to financial services and insurance activities	2600	1.77	1.33	1.17	0.90	1.17
49 : Land transport and transport via pipelines	2300	1.58	1.89	1.97	1.59	1.97
55 : Accommodation	2200	1.53	1.21	1.26	1.30	1.26
71 : Architectural and engineering activities; technical testing and analysis	2200	1.53	2.37	1.48	1.39	1.48
10 : Manufacture of food products	2100	1.47	1.32	1.64	2.58	1.64
96 : Other personal service activities	2100	1.43	1.35	1.16	1.29	1.16
68 : Real estate activities	1900	1.30	1.04	1.15	0.98	1.15
93 : Sports activities and amusement and recreation activities	1800	1.23	1.62	1.58	1.45	1.58
41 : Construction of buildings	1600	1.10	1.06	1.03	0.90	1.03
81 : Services to buildings and landscape activities	1500	1.07	2.04	2.35	1.20	2.35
52 : Warehousing and support activities for transportation	1500	1.03	1.47	1.36	0.90	1.36
42 : Civil engineering	1400	0.99	0.84	0.86	0.79	0.86
62 : Computer programming, consultancy and related activities	1400	0.98	1.62	1.05	0.74	1.05
53 : Postal and courier activities	1400	0.98	1.25	0.92	0.78	0.92

3.2 Leaving aside retail trade and public services which are typically labour-intensive industries, the key sectors for employment in CW&C are:

- Financial service activities
- Specialised construction activities
- Activities of head offices
- Manufacture of motor vehicles
- Manufacture of chemicals and chemical products

3.3 The next stage of the analysis is to understand how these sectors perform relative to the national position as this will enable a clearer insight into the comparative advantage of the district. A useful tool in this regard is to calculate Location Quotients which present the proportion of each sector as compared to the equivalent percentage at the national level. Thus, scores of over 1.00 indicate a relatively strong representation locally while scores of over 2.00 indicate that double the proportion of employees in CW&C work in the sector compared to the position in England and Wales. The table below highlights all those sectors with a score greater than 1.00:

Location Quotients (>1.00) for 2-Digit SIC codes for Cheshire West and Chester (BRES, 2011)

Sector	LQ
19 : Manufacture of coke and refined petroleum products	12.91
20 : Manufacture of chemicals and chemical products	4.47
29 : Manufacture of motor vehicles, trailers and semi-trailers	3.96
64 : Financial service activities, except insurance and pension funding	3.10
75 : Veterinary activities	2.53
23 : Manufacture of other non-metallic mineral products	2.09
03 : Fishing and aquaculture	2.06
91 : Libraries, archives, museums and other cultural activities	1.83
02 : Forestry and logging	1.78
08 : Other mining and quarrying	1.67
32 : Other manufacturing	1.52
45 : Wholesale and retail trade and repair of motor vehicles and motorcycles	1.47
96 : Other personal service activities	1.32
42 : Civil engineering	1.32
78 : Employment activities	1.20
66 : Activities auxiliary to financial services and insurance activities	1.19
10 : Manufacture of food products	1.16
47 : Retail trade, except of motor vehicles and motorcycles	1.16
55 : Accommodation	1.16
38 : Waste collection, treatment and disposal activities; materials recovery	1.10
22 : Manufacture of rubber and plastic products	1.10
95 : Repair of computers and personal and household goods	1.08
70 : Activities of head offices; management consultancy activities	1.08
87 : Residential care activities	1.07
56 : Food and beverage service activities	1.07
71 : Architectural and engineering activities; technical testing and analysis	1.06
80 : Security and investigation activities	1.02
85 : Education	1.0

3.4 By calculating LQs for the individual sectors, it is clear to see the relative strength of the chemical and petrochemical sector for CW&C. The employment associated with the manufacturer of coke and refined petroleum products is almost 13 times that of the national average. However, in isolation this sector employs less than a 1,000 people and does not feature in the top 30 sectors for employment in the district. Its linkages with the manufacture of chemicals is possibly more valuable to the district in that chemical product manufacturing counts for over 2,500 jobs in CW&C and equates to a proportion that is almost five times that of the national position in England and Wales. Both of these indicators suggest comparative strengths for the area which are nationally significant.

3.5 Manufacture of motor vehicles is another case where the sector in CW&C supports far more employment than it does nationally (almost four times the average for England and Wales), and in the district itself the industry accounts for almost 3,000 jobs and so is a large standalone employer for Cheshire West.

3.6 However, that is not to say that CW&C only has a comparative advantage in manufacturing. In particular the primacy of financial services is supported by the LQ analysis. Finance activity employs over 8,000 people in CW&C which at 6.10% of total employees is three times the proportion that can be expected at the national level.

3.7 Other key sectors for employment in CW&C, namely activities of head offices and specialised construction, are not areas of relative strength for the district when observing the associated LQs. In particular, specialised construction does not meet the national average in terms of employment contribution and so other districts are likely to outperform CW&C in this area.

Largest Businesses

3.8 The strength of a sector is often characterised by the presence of major players and so the following table shows the 20 largest companies in terms of turnover, which are registered in Cheshire West and Chester:

20 Largest Registered Businesses by Turnover in Cheshire West & Chester (Fame, 2012)

Company name	Postcode	Turnover £000s	Employees	Primary UK SIC (2007) description
Holidaybreak Limited	CW8 1HW	461,700	3,480	Camping grounds, recreational vehicle parks and trailer parks
Growhow UK Limited	CH2 4LB	392,451	555	Manufacture of other chemical products n.e.c.
Innospec Limited	CH65 4EY	238,473	387	Manufacture of other inorganic basic chemicals
Homefield PVT UK Ltd.	CW8 4DT	235,317	1,327	Activities of head offices
Tata Chemicals Europe Limited	CW8 4DT	155,077	470	Manufacture of other inorganic basic chemicals
Britton Flexibles Limited	CW7 3RD	150,275	673	Activities of production holding companies
Glanbia Cheese Limited	CW9 7UD	150,267	336	Liquid milk and cream production
Nalco Limited	CW8 4DX	131,698	553	Manufacture of other inorganic basic chemicals
Graham Bell (Holdings) Limited	CW7 3AL	126,593	219	Activities of other holding companies (not including agricultural, production, construction, distribution and financial services holding companies
Trouw (Uk) Limited	CW9 6DF	103,411	147	Marine aquaculture
Greenbank Holidays Limited	CW8 1HW	94,742	201	Travel agency activities
Britton Taco Limited	CW7 3RD	85,369	228	Manufacture of other plastic products
The Hut Group Limited	CW9 7RA	84,104	264	Other retail sale not in stores, stalls or markets
Frank Roberts & Sons Limited	CW9 7RQ	70,251	847	Manufacture of bread; manufacture of fresh pastry goods and cakes
Tata Chemicals Magadi Limited	CW8 4DT	62,192	720	Manufacture of other inorganic basic chemicals
Salt Union Limited	CW7 2PA	56,134	112	Extraction of salt
Britton Merlin Limited	CW7 3RD	55,081	284	Printing (other than printing of newspapers and printing on labels and tags)
RSK Group PLC	WA6 0AR	55,038	729	Management consultancy activities (other than financial management)
Greif UK Ltd	CH65 4EY	53,144	174	Manufacture of steel drums and similar containers
Uren Food Group Limited	CH64 7TB	51,444	288	Wholesale of fruit and vegetables

3.9 As already outlined, there are limitations when solely relying on Companies House data as many key businesses are neglected in the search due to formalities over where the registered office is located, rather than a firm's main operations. With this, a number of additional leading employers were flagged up by economic development officers from the district. These have been set out in detail in the Appendices, but the key businesses which should be highlighted here include:

- Henkel Consumer Adhesives (Chemicals)
- General Motors (Automotive)
- Essar (Chemicals)
- Barclays Bank (Finance)
- Rolls Royce (Engineering)
- Vion Group (Food and Drink)

3.10 The strength of the chemicals industry in CW&C is underscored by the presence of a number of large companies such as Tata Chemicals, Nalco, Henkel and Innospec. Food manufacturing is another sector which is characterised by large businesses, in which Glanbia Cheese, Frank Roberts and Vion Group all rank highly on the biggest enterprises list for CW&C. However, despite the presence of these firms, the manufacturer of food products is not a major employer (2,100 jobs) and accordingly is only marginally above England and Wales in terms of proportion of total employment. This would suggest that employment is limited in the sector beyond the handful of large businesses that are present in the district.

Cheshire West & Chester *cont*

Enterprise Stocks

3.11 The final indicator to investigate is the overall stock of businesses within CW&C, which will further illustrate the nature of the various sectors in the district. The table below shows the 30 sectors with the most business units.

3.12 It is using this level of analysis in which a number of other sectors come to light which were not well represented in the table of largest businesses. In particular, head office activities and architectural and engineering services are characterised by a larger pool of businesses than is the case within England and Wales. The notable absences are chemicals and automotive which emphasises the dominance of large players in these industries. Financial services is characterised by a relatively higher number of individual enterprises, although the business base for the sector amounts to only 1.5% of the CW&C economy.

Numbers of Businesses by 2-Digit SIC Code for Cheshire West and Chester (ONS)

Sector	Cheshire West	Cheshire West %	North Wales (%)	MDA (%)	C&W (%)	England and Wales (%)
47 : Retail trade, except of motor vehicles and motorcycles	1,775	13.10	14.04	13.25	11.77	11.50
56 : Food and beverage service activities	874	6.45	7.45	6.82	5.85	6.20
70 : Activities of head offices; management consultancy activities	855	6.31	2.35	4.51	6.53	5.00
43 : Specialised construction activities	775	5.72	7.58	7.02	5.70	7.20
46 : Wholesale trade, except of motor vehicles and motorcycles	620	4.58	4.47	4.63	5.41	5.10
62 : Computer programming, consultancy and related activities	620	4.58	2.33	3.62	5.37	4.70
71 : Architectural and engineering activities; technical testing and analysis	579	4.27	2.34	3.44	4.22	2.80
96 : Other personal service activities	501	3.70	3.00	3.54	3.87	3.20
82 : Office administrative, office support and other business support activities	448	3.31	2.31	3.04	3.58	3.20
45 : Wholesale and retail trade and repair of motor vehicles and motorcycles	446	3.29	3.80	3.50	3.46	3.10
68 : Real estate activities	444	3.28	2.34	2.85	3.45	3.60
41 : Construction of buildings	414	3.06	3.50	3.23	3.39	3.60
85 : Education	386	2.85	3.34	3.05	2.59	2.60
69 : Legal and accounting activities	383	2.83	1.56	2.27	2.34	2.70
86 : Human health activities	306	2.26	2.31	2.44	2.08	2.10
74 : Other professional, scientific and technical activities	290	2.14	1.52	2.01	2.36	2.40
49 : Land transport and transport via pipelines	281	2.07	2.96	2.40	2.14	2.00
81 : Services to buildings and landscape activities	281	2.07	2.25	1.96	1.93	2.00
88 : Social work activities without accommodation	280	2.07	2.73	2.50	1.74	2.00
93 : Sports activities and amusement and recreation activities	199	1.47	1.49	1.49	1.42	1.20
64 : Financial service activities, except insurance and pension funding	198	1.46	1.03	1.24	1.43	1.50
78 : Employment activities	158	1.17	0.44	0.79	1.13	1.00
42 : Civil engineering	146	1.08	1.48	1.13	0.91	1.10
77 : Rental and leasing activities	133	0.98	1.07	0.98	1.01	0.80
87 : Residential care activities	120	0.89	1.73	1.36	0.95	1.30
94 : Activities of membership organisations	119	0.88	1.24	1.08	0.83	1.00
25 : Manufacture of fabricated metal products, except machinery and equipment	114	0.84	1.10	1.11	0.88	1.10

66 : Activities auxiliary to financial services and insurance activities	103	0.76	0.51	0.67	0.81	0.90
55 : Accommodation	97	0.72	2.73	0.77	0.50	0.70
84 : Public administration and defence; compulsory social security	93	0.69	1.66	0.93	0.57	0.90

Findings

3.13 The main findings to be drawn from the outlined data are:

- In terms of absolute job numbers, financial services, activities of head offices, automotive manufacturing and chemical manufacturing are sizeable sectors supporting a significant level of employment in the district.
- In terms of relative strengths, the production of petrochemicals achieves a significant LQ of almost 13, but its linkage to the overall chemical sector is likely to be a key finding that underpins the area's strength in this industry. Additionally, automotive manufacturing comes out favourably which suggests a strong manufacturing sector for the district. However, there are areas of the service economy which are particularly pronounced, specifically the financial services sector (particularly around Chester) which suggests a healthy level of diversity.
- An analysis of the largest businesses further supports the dominance of the chemical / petrochemical industry in which many of the biggest firms operate in this area of production. Furthermore, food and drink manufacturing is another sector which is characterised by a number of large employers, although it should be noted that the overall employment base is smaller than many other industries.
- An analysis of the overall business base highlights the strengths in other sectors which are not apparent using the other indicators. This is particularly in the area of activities of head offices and computer programme which boast a large pool of relatively small firms which make up a greater proportion of the total compared to the national average.

Warrington

Sectors by Employment

4.1 As with the two previous sector profiles, the analysis begins with employment figures reported within the BRES for sectors in Warrington. Figure 1 below provides an overview of the 30 largest sectors in terms of employment numbers by 2-digit SIC code:

Numbers employed in Warrington for the 30 largest sectors by 2-digit SIC code (BRES, 2011)

Industry	Warrington	Warrington %	Cheshire & Warrington %	North West %	MDA Total %	England and Wales %
47 : Retail trade, except of motor vehicles and motorcycles	10,700	9.50	10.73	10.67	11.37	10.32
85 : Education	7,200	6.43	8.14	9.21	9.51	9.75
86 : Human health activities	7,100	6.35	6.90	8.37	9.66	7.28
56 : Food and beverage service activities	6,900	6.13	5.50	5.48	5.16	5.33
78 : Employment activities	6,600	5.86	4.01	2.70	3.23	3.07
84 : Public administration and defence; compulsory social security	6,500	5.78	4.30	6.10	5.81	5.71
46 : Wholesale trade, except of motor vehicles and motorcycles	5,600	4.97	3.81	3.83	2.88	4.23
81 : Services to buildings and landscape activities	5,200	4.60	2.04	2.35	1.20	2.29
71 : Architectural and engineering activities; technical testing and analysis	4,700	4.17	2.37	1.48	1.39	1.44
43 : Specialised construction activities	4,400	3.90	2.59	2.62	2.65	2.39
88 : Social work activities without accommodation	3,000	2.69	2.84	3.57	3.61	3.25
53 : Postal and courier activities	2,600	2.28	1.25	0.92	0.78	1.02
70 : Activities of head offices; management consultancy activities	2,500	2.26	2.40	1.63	1.36	1.96
49 : Land transport and transport via pipelines	2,500	2.19	1.89	1.97	1.59	1.90
82 : Office administrative, office support &other business support activities	2,400	2.16	1.52	1.28	1.03	1.21
87 : Residential care activities	2,400	2.13	2.65	2.80	2.97	2.50
45 : Wholesale and retail trade and repair of motor vehicles and motorcycles	2,200	1.94	2.28	1.83	1.96	1.74
52 : Warehousing and support activities for transportation	1,900	1.72	1.47	1.36	0.90	1.36
69 : Legal and accounting activities	1,800	1.61	1.82	2.27	1.63	1.96
62 : Computer programming, consultancy and related activities	1,800	1.59	1.62	1.05	0.74	1.87
61 : Telecommunications	1,700	1.54	0.69	0.68	0.22	0.78
64 : Financial service activities, except insurance and pension funding	1,400	1.23	3.38	1.74	2.68	1.97
93 : Sports activities and amusement and recreation activities	1,400	1.21	1.62	1.58	1.45	1.51
41 : Construction of buildings	1,300	1.19	1.06	1.03	0.90	1.17
96 : Other personal service activities	1,200	1.06	1.35	1.16	1.29	1.08
80 : Security and investigation activities	1,100	1.01	0.64	0.75	0.45	0.70
24 : Manufacture of basic metals	*	*	0.33	0.47	0.34	0.28
10 : Manufacture of food products	1,100	0.96	1.32	1.64	2.58	1.26
25 : Manufacture of fabricated metal products, except machinery and equipment	1,100	0.94	1.02	1.05	1.06	1.06
42 : Civil engineering	900	0.81	0.84	0.86	0.79	0.75

4.2 As the table above shows, the largest sectors for employment beyond retail and public services, are broadly associated with construction, engineering and the built environment, specifically they consist of:

- Services to buildings and landscape activities
- Architectural and engineering activities
- Specialised construction activities

4.3 After this, distribution activities and head office activities rank highly, as well as office administration and business support activities.

4.4 The next logical step is to understand how these sectors rank in terms of the national position as this will enable a clearer insight into the comparative advantage of the district. A useful tool in this regard is to calculate Location Quotients which present the proportion of each sector as compared to the equivalent percentage at the national level. Thus, scores of over 1.00 indicate a relatively strong representation locally while scores of over 2.00 indicate that double the proportion of employees in CW&C work in the sector compared to the position in England and Wales. The table below highlights all those sectors with a score greater than 1.00:

Location Quotients (>1.00) for 2-Digit SIC codes for Warrington (BRES, 2011)

Sector	LQ
24 : Manufacture of basic metals	3.60
95 : Repair of computers and personal and household goods	3.31
71 : Architectural and engineering activities; technical testing and analysis	2.89
53 : Postal and courier activities	2.24
81 : Services to buildings and landscape activities	2.01
61 : Telecommunications	1.98
78 : Employment activities	1.91
20 : Manufacture of chemicals and chemical products	1.84
11 : Manufacture of beverages	1.83
82 : Office administrative, office support and other business support activities	1.78
39 : Remediation activities and other waste management services. This division includes the provision of remediation services, i.e. the cleanup of contaminated buildings and sites, soil, surface or ground water.	1.70
43 : Specialised construction activities	1.63
37 : Sewerage	1.59
92 : Gambling and betting activities	1.57
36 : Water collection, treatment and supply	1.50
19 : Manufacture of coke and refined petroleum products	1.47
80 : Security and investigation activities	1.44
79 : Travel agency, tour operator and other reservation service and related activities	1.41
77 : Rental and leasing activities	1.32
52 : Warehousing and support activities for transportation	1.26
35 : Electricity, gas, steam and air conditioning supply	1.25
46 : Wholesale trade, except of motor vehicles and motorcycles	1.17
38 : Waste collection, treatment and disposal activities; materials recovery	1.17
49 : Land transport and transport via pipelines	1.16
70 : Activities of head offices; management consultancy activities	1.15
56 : Food and beverage service activities	1.15
45 : Wholesale and retail trade and repair of motor vehicles and motorcycles	1.11
42 : Civil engineering	1.09
33 : Repair and installation of machinery and equipment	1.07
41 : Construction of buildings	1.01
84 : Public administration and defence; compulsory social security	1.01
74 : Other professional, scientific and technical activities	1.01
75 : Veterinary activities	1.01

4.5 The picture changes somewhat when considering proportions of employment instead of absolute total of people employed. In particular, manufacturing of basic metals is identified as a particularly strong sector in that Warrington has over three times the proportion of employment in the industry compared to England and Wales. However, this is more indicative of the small fraction of employment in this sector nationally than the scale of the sector in Warrington (which employs only just over 1,000 people).

4.6 More interestingly, the notable scale of employment in architectural and engineering services in the borough is re-emphasised by the LQ score which shows that Warrington has almost three times the amount of jobs in this sector compared to the national average. Other strong industries in this regard include postal and courier activities; services to building and landscapes, and office administrative – all of which were identified as key sectors in the absolute figures. The only exceptions would be in other manufacturing activities e.g. chemicals and beverages which did not rank highly in terms of absolute employment but do so when considering proportions of employment. Given this, the positive scores are more likely to be attributed to the scarcity of such employment nationally.

Largest Businesses

4.7 The strength of a sector is often characterised by the presence of major players and so the following table shows the 20 largest companies in terms of turnover, which are registered in Warrington:

20 Largest Registered Businesses by Turnover in Warrington (Fame, 2012)

Company name	Postcode	Turnover £000s	Employees	Primary UK SIC (2007) description
Done Brothers (Cash Betting) Limited	WA3 7PQ	4,110,480	2,996	Betting operations.
GB Oils Limited	WA3 6XG	3,150,587	1,957	The sale of oil products.
European Metal Recycling Limited	WA5 7NS	2,431,157	2,226	Metals and haulage, wharf operating, stevedoring, shipbroking and chartering.
Tote Bookmakers Limited	WA3 7PQ	2,256,753	1,939	Bookmakers.
United Utilities PLC	WA5 3LP	1,513,000	4,735	Holding company & operates electricity distribution, water & wastewater assets and also manages infrastructure and business processes for its own and other businesses.
United Utilities Water PLC	WA5 3LP	1,485,500	4,218	The management and operation of water and wastewater services.
Talktalk Communications Limited	WA3 7BH	1,342,048	1,487	The provision of telecommunications services.
Eddie Stobart Limited	WA4 4TQ	441,988	4,697	The provision of haulage and distribution services, and warehousing facilities and services throughout the UK and Europe.
North West Electricity Networks (UK)	WA3 6XG	396,000	1,199	A group engaged in the operation of electricity distribution assets.
Electricity North West Limited	WA3 6XG	393,800	1,189	A group engaged in the distribution of electricity. t/o = revenue.
Parasol Limited	WA1 1RL	382,884	8,318	The provision of consultancy services.
Paragroup Management Limited	WA1 1RL	382,884	8,409	A group engaged in the provision of consultancy services.
Pace Fuelcare Limited	WA3 6XG	370,195	232	The distribution and marketing of petroleum products.
Borregaard Industries Limited	WA3 6QQ	304,541	825	International chemicals company involved in lignin based binding and dispersing agents, specialty pulp for chemical applications, and fine chemicals for the pharmaceutical industry and other selected markets.
Novelis UK Ltd	WA4 1NN	289,398	468	The processing and sale of aluminium products.
Tote Credit Limited	WA3 7PQ	214,158	234	A telephone and internet bookmaker.
Vestas Offshore UK Ltd	WA3 6XG	177,260	126	The marketing, sale and construction of offshore wind turbine installations and provision of maintenance of the existing offshore.
V.I.P. Computer Centre Limited	WA1 4RF	158,650	161	A group engaged in the wholesale and distribution of it components and associated products.

4.8 The Companies House list highlights a number of key points regarding the sector profile for Warrington:

- The relative strength in the manufacture of metals is likely to be attributed to the presence of European Metal Recycling and Novelis as major employers for the area, rather than due to a broad-based cluster of organisations involved in the industry.
- Many of the largest firms represent industries that are not highlighted as key sectors in the location quotient analysis. The example being electricity supply, in which United Utilities and North West Electricity Networks are reported as major firms by turnover using Companies House data. However, while both firms have registered offices in the district, their operations are like to take place across the region and nationally, and so the ONS data in this regard may be more accurate of the level activity in Warrington (i.e. the LQ for electricity supply is

only marginally above 1.00). This is likely to be true of the gambling sector in Warrington as well, in which a Fred Done (and now including The Tote) has head offices in the district but the LQ, at 1.57, is lower than many other industries.

- Not a single firm from the built environment / engineering sector are represented in the list despite the significant job numbers and relative performance shown in the LQs. Again, this is likely to be reflection of the limitations of Companies House data and the typical scale of companies in the sector.

4.9 In this regard, the consultant team engaged with the economic development team to highlight large companies active in the district which were not picked up. In particular, the following key businesses were identified:

- Sellafield Ltd (Nuclear)
- Serco (Nuclear)
- Rolls Royce (Nuclear design)
- AMEC (Design Engineering and R&D)
- Atkins (Engineering)
- Rolls Royce (Design Engineering)
- Fujitsu (IT)
- HP (IT)
- Schneider Electric (Energy infrastructure)

4.10 Observing the list above, it is clear that there are number of large, multinational firms involved in engineering, energy and ICT that have a significant presence in Warrington but are unlikely to have a registered office in the district and so are not picked up in Companies House data. In particular, Warrington is host to a number of large businesses associated with the nuclear industry which supports about 4,000 employees, which if picked up as a discrete sector in ONS data, would position it as a leading industry in the district.

Enterprise Stocks

4.11 The final indicator to investigate is the overall stock of businesses within Warrington, which will further illustrate the nature of the various sectors in the district. The table overleaf shows the 30 sectors with the most business units.

4.12 From this breakdown, we again observe the strength of the architectural and engineering sector in which the proportion of businesses in Warrington is almost double of that for England and Wales. Similarly activities of head offices and computer programming are characterised by a high number of businesses which is above the national average and so suggests a well-developed sector in both cases.

Numbers of Businesses by 2-Digit SIC Code for Warrington (ONS)

	Warrington	Warrington %	North Wales (%)	MDA (%)	C&W(%)	England and Wales (%)
47 : Retail trade, except of motor vehicles and motorcycles	897	11.17	14.04	13.25	11.77	11.50
43 : Specialised construction activities	516	6.42	7.58	7.02	5.70	7.20
71 : Architectural and engineering activities; technical testing and analysis	466	5.80	2.34	3.44	4.22	2.80
46 : Wholesale trade, except of motor vehicles and motorcycles	462	5.75	4.47	4.63	5.41	5.10
70 : Activities of head offices; management consultancy activities	455	5.66	2.35	4.51	6.53	5.00
62 : Computer programming, consultancy and related activities	442	5.50	2.33	3.62	5.37	4.70
56 : Food and beverage service activities	439	5.46	7.45	6.82	5.85	6.20
96 : Other personal service activities	301	3.75	3.00	3.54	3.87	3.20

45 : Wholesale and retail trade and repair of motor vehicles and motorcycles	300	3.73	3.80	3.50	3.46	3.10
82 : Office administrative, office support and other business support activities	256	3.19	2.31	3.04	3.58	3.20
41 : Construction of buildings	238	2.96	3.50	3.23	3.39	3.60
68 : Real estate activities	231	2.88	2.34	2.85	3.45	3.60
85 : Education	222	2.76	3.34	3.05	2.59	2.60
49 : Land transport and transport via pipelines	185	2.30	2.96	2.40	2.14	2.00
74 : Other professional, scientific and technical activities	178	2.22	1.52	2.01	2.36	2.40
69 : Legal and accounting activities	152	1.89	1.56	2.27	2.34	2.70
81 : Services to buildings and landscape activities	151	1.88	2.25	1.96	1.93	2.00
88 : Social work activities without accommodation	149	1.85	2.73	2.50	1.74	2.00
86 : Human health activities	145	1.81	2.31	2.44	2.08	2.10
87 : Residential care activities	127	1.58	1.73	1.36	0.95	1.30
78 : Employment activities	115	1.43	0.44	0.79	1.13	1.00
77 : Rental and leasing activities	114	1.42	1.07	0.98	1.01	0.80
64 : Financial service activities, except insurance and pension funding	103	1.28	1.03	1.24	1.43	1.50
25 : Manufacture of fabricated metal products, except machinery and equipment	100	1.24	1.10	1.11	0.88	1.10
93 : Sports activities and amusement and recreation activities	90	1.12	1.49	1.49	1.42	1.20
52 : Warehousing and support activities for transportation	81	1.01	0.51	0.64	0.66	0.70
53 : Postal and courier activities	77	0.96	0.67	0.62	0.60	0.70
42 : Civil engineering	64	0.80	1.48	1.13	0.91	1.10
94 : Activities of membership organisations	64	0.80	1.24	1.08	0.83	1.00
73 : Advertising and market research	56	0.70	0.29	0.49	0.85	0.70

Findings

4.13 The main findings to be drawn from the sector data for Warrington are:

- In terms of employment, the key sectors for employment are associated with the built environment, in particular architectural and engineering services which employ a large number of people in absolute terms as well as demonstrating a relative strength for the local authority based on the Location Quotients.

- Other important sectors when considering employment include distribution, logistics and business services, both in terms of the overall numbers employed and as a proportion of total employment. Manufacturing, in particular chemicals and basic metals, can be regarded as important sectors in terms of the relative strength of Warrington compared to the rest of UK.

- An analysis of Companies House data does not give a comprehensive view on the presence of large employers in the local authority. In particular, a number of important multi-nationals in the engineering and IT sector are not picked up including AMEC, Sellafield Ltd, Fujitsu and Schneider Electric – all of which demonstrate the strength of the consulting engineering sector as well as IT. In contrast, the leading registered businesses largely represent the energy and utilities industry, gambling and various activities of head offices.

- An analysis of the overall business base again highlights the strength of the architectural and engineering services sector which is characterised by a higher number of firms than that of England and Wales. Likewise, the proportion of businesses providing head office functions and computer programming is also larger than the national average.

Sector Review

Introduction

5.1 Having provided a detailed sector profile for each of three local authorities: Cheshire East, Cheshire West & Chester and Warrington, the next stage is to understand the sector dynamics within the area as a whole. As such, this section will examine the sector position, relative strength and trends in development.

5.2 When considering the sectors and sub-sectors in which the area has a significant offer, it is important to present these in the context of the overall policy landscape in which the UKTI is engaging with local authorities to present their strengths under a series of priority sectors. These priority sectors are as follows:

- Advanced Engineering
- Financial & Business Services
- Life Sciences, Food and Chemicals
- Energy and the Environment
- Information and Communications Technology (ICT)

5.3 The UKTI framework has created somewhat broad sector headings under which a large number of industries and activities fall. When considering the sector position of Cheshire and Warrington, these sectors have been separated in the following manner.

UKTI Sectors	Breakdown in this Report
Advanced Engineering	Automotive
	Consulting Engineering
	Machinery manufacture (instrumentation and control)
	Aerospace
	Engineered Products
Financial & Business Services	Financial services
	Business Services
	Activities of head offices
Life Sciences, Food and Chemicals	Pharmaceuticals and biopharma
	Food
	Chemicals, petrochemicals and minerals
Energy and Environment	Nuclear
	Utility Supply
ICT	Electrical and electronics manufacture
	Telecommunications
	Software
Other	Paper & Packaging

5.4 These sector headings still allow duplication. Some areas such as engineering, specialist construction or technical testing will support several of these sectors and are not considered in their own right under the UKTI framework. It is accepted, however, that there is no perfect manner in which to separate all sector activity and using the UKTI framework offers a pragmatic approach. In addition the UKTI framework allows Cheshire and Warrington to make a strong case in each of the umbrella headings – even if this is only for one area under the umbrella headings.

Advanced Engineering

5.5 One of the areas of strength for the Cheshire and Warrington area is in advanced engineering. All three authorities demonstrate employment within this sector. This overall sector reflects engineering and manufacturing activities which require a relatively high level of technical skills and knowledge. Cheshire and Warrington's strength in this area is particularly apparent in a number of sub-sectors which include automotive, architectural & engineering, testing and associated scientific research and development. As shown in the table below, these sub-sectors support a considerable amount of employment which in the case of automotive is more than three times the proportion of employment for this sector in England and Wales.

5.6 The strength of 'Architectural and engineering activities; technical testing and analysis' and 'Scientific research and development' is addressed later in this section but is a sector which is likely to support various industries including chemicals, construction, energy, environmental, food and pharmaceuticals. There is a risk by focusing on specific sector definitions that this important strength of the area is missed or diluted.

Advanced Engineering employment for Cheshire and Warrington (BRES, 2011)

Advanced Engineering	Cheshire East	CW&C	Warrington	Total	LQ
28 : Manufacture of machinery and equipment n.e.c.	1,300	200	400	2,000	0.70
29 : Manufacture of motor vehicles, trailers and semi-trailers	*	*	*	7,000	3.29
30 : Manufacture of other transport equipment	400	100	-	500	0.28
71 : Architectural and engineering activities; technical testing and analysis	3,000	2,200	4,700	9,900	1.65
72 : Scientific research and development	*	*	*	4,200	2.14
Total	12,300	5,900	5,500	23,600	

Automotive

5.7 Automotive manufacturing is a well established industry in the area, representing 1.69% of employees in Cheshire and Warrington compared to 0.48% for Great Britain and employing a total in excess of 7,000 people. The most significant automotive businesses in the area are the Bentley manufacturing plant and the General Motors assembly plant which between them employ approximately 6,000 people. While this total can fluctuate, it equates to almost 85% of all employment in the area's automotive industry.

5.8 Bentley Motors has been headquartered in Crewe since 1946 and is now owned by Volkswagen AG. The Crewe plant is understood to employ around 4,000 people, working across activities including R&D, engineering, production and the activities required of the head office of a global brand. Furthermore, the Integrated Logistics Centre manages a supply chain of over 650 suppliers. The strategic importance of Bentley Motors for the area is underscored by the fact it is the third largest R&D investor in the UK's automotive sector and the 18th largest investor nationally. The firm has shown growth in the last few years with over 7,000 vehicles sold in 2011, an increase of 37% from the previous year and the demand for premium brands in the growth economies of Asia have helped drive this growth.

5.9 The second largest automotive plant by employment is based in Ellesmere Port where General Motors operates a volume assembly plant. The plant produces the 5-door Astra and Astravan for Vauxhall and Opel. It currently employs 2,100 staff and has the capacity for 187,000 vehicles a year. The Ellesmere Port facility has faced a difficult period. Despite securing the investment for an Astra model upgrade at the expense of a General Motors facility in Belgium in the mid-2000s the weakness in the performance of General Motors Europe has raised further doubts about the future of the plant. Whilst the facility employs a large number of people, the supply chain for the facility is somewhat limited with pan-European procurement decisions being undertaken for Astra production and a limited number of UK firms being involved in the product.

5.10 The presence of these large assembly plants may have supported the development of a few tier 1 and 2 suppliers in the area, although there relatively few companies identified by this. Cheshire and Warrington is however well positioned to supply the other volume car plants in the UK (Sunderland, Derby, West Midlands, Swindon and Oxford).

5.11 For example, Airbags International, based in Congleton, is a division of the multi-national company Autoliv, and produce over 14 million airbags a year in order to supply all major vehicle manufactures, as well as undertaking associated R&D in automotive safety. Equally, Mitras Automotive is one of Europe's leading suppliers of engineered composite components to the automotive industry with both compression and reaction injection moulding facilities enabling the firm to offer a range of services from simple mouldings to Class "A" painting and full system design and assembly, all developed at its facilities in Winsford.

5.12 There are also a number of other niche businesses supplying products such as specialist filters to the automotive industry, these include K&N Filters and Baldwin Filters in Warrington. Other specialist companies classed within the automotive sector include Nitrac Ltd, a supplier of brake products and Genotec, who supply electrical equipment.

5.13 Notably the area hosts a number of vehicle modification specialists such as Whitby Specialist Vehicles who produce ice cream vans and Voyager MPV who manufacture wheelchair accessible taxis and minibuses, both based in Crewe. The development of these businesses may have resulted in skills developed at Bentley Motors or have been derived from the truck industry which although now closed, included Foden and ERF trucks which were manufactured in Sandbach and Middlewich respectively until the early-2000s.

5.14 In addition, the nature of the automotive sector means that there will be more companies deriving some aspects of their revenue from automotive than are classified as directly related to the industry. a notable example being Rolls-Royce, who make Auxiliary Power Units for military vehicle applications, including the BAE Systems Titan and Trojan tank system from their site in Winsford. The site employs a workforce of around 100 people.

5.15 It is almost impossible to capture every company that derives large elements of its turnover from automotive. The supply chain to the sector beyond the major tier-1 suppliers is vast and there will no doubt be companies that this analysis has missed.

5.16 Notwithstanding the likelihood that there are probably further suppliers, the automotive sector is an important sector for Cheshire and Warrington, supporting a large number of jobs, both absolutely and relative to the UK as a whole. While this level of employment is significantly linked to the major plants in Crewe and Ellesmere Port, the presence of a number of suppliers and component manufacturers give the industry an added level of resilience, in particular due to the leading position in niche manufacturing that many of the firms demonstrate.

5.17 Nevertheless, given the strength of the industry in the area; the history of production; and the position of Cheshire and Warrington between many of the remaining UK assembly / manufacturing plants, it is somewhat surprising that there is not a greater depth of component manufacture and supply. Toyota and (soon) JLR will all transport drive train products from just outside Cheshire to manufacturing plants just the other side of the Cheshire border and whilst new investment in automotive component manufacturing plants is undertaken somewhat infrequently this must remain an area of opportunity for Cheshire.

Consulting Engineering

5.18 The strength of core infrastructure activities in the area such as nuclear energy, electricity distribution and water management, has led to a deep and broad base of professional services in engineering consultancies often specialising in planning, design, engineering, construction and project management. These organisations will support a broad number of industries. With this, engineering activities and technical consultancy represents 2.01% of employment compared to the 1.08% average for Great Britain and higher than other apparently notable engineering locations, such as Birmingham (1.30%) and Glasgow (1.33%).

Comparative Employment Levels in Consulting Engineering

	Cheshire and Warrington	Birmingham	Glasgow	England and Wales
7112 : Engineering activities and related technical consultancy	8,400	5,900	5,100	255,900
Percentage of total employment	2.01	1.30	1.33	1.08

5.19 The sector is characterised by a number of national and multi-national consulting engineering firms with large operations in the area. The table below highlights possibly the most notable companies and the nature of their activities:

Selected Consulting Engineering Businesses in Cheshire and Warrington (BRES, 2011)

Company	Activity
AMEC Group	Significant number of operations including Earth & Environmental Division and Power & Process as well as HQ of AMEC Nuclear
RSK Plc	UK HQ of international multidisciplinary environmental and engineering design consultancy
Atkins Global	NW Regional Office: design engineering and project management
URS / Scott Wilson	NW Regional Office: Engineering, construction and technical services in the energy sector
MWH UK	UK HQ: Consultancy in area of sustainable waste and energy management
Jacobs Engineering	Professional technical services in design engineering, particularly in nuclear
Halcrow (CH2M Hill)	North of England office for infrastructure, water and energy projects
Nuvia	Nuclear power consulting group
Boulting Group	Multi Discipline engineering consultancy
EA Technology	Technical services and products to meet the needs of operators of power networks
Dassault Systems Simulia	Small specialist operation providing complex simulation results for engineering solutions across different industries

5.20 The strength of the sector is not only underpinned by local projects. These companies have selected the area because of its transport links to allow teams to travel to other regional, national and international projects. Cheshire and Warrington has provided such a base without the transport inconvenience and excessive cost of a city centre office in Manchester or Liverpool and access to the widest pool of skilled labour by drawing staff from the catchment areas of both City Regions.

5.21 AMEC can be considered one of the leading consulting engineering companies given its broad range of services and size of operations nationally and internationally. Its presence in Cheshire and Warrington has been strengthened with its acquisition of Entec in Northwich in 2010, which was one of the UK's leading environmental engineering consultancies. Notably, AMEC has its only nuclear R&D site in Warrington, and alongside Atkins, Jacobs Engineering and the National Nuclear Laboratory, there is a nationally important sub-sector strength in Warrington, providing design engineering services to the nuclear industry.

5.22 The level of expertise in engineering services to the nuclear industry is indicative of the level of activity relating to energy infrastructure more generally. URS / Scott Wilson, MWH UK, ABS Consulting and EA Technologies all employ a large number of people to provide engineering consultancy to energy projects (nuclear and otherwise) both nationally and internationally. Furthermore, there are a number of specialist companies which provide niche services to the energy industry. Examples can be found across Cheshire and Warrington such as Sonomatic in Warrington which provides ultrasonic inspection design, development and application in the oil and gas industry. Likewise, Ichron Limited, in Northwich, is one of the leading specialist geological consultants which work on a number of international offshore oil and gas projects, providing consultancy related to chemostratigraphy, biostratigraphy, reservoir modelling and quality evaluation.

5.23 Cygnet Group, again based in Northwich, also provide services to the oil and gas industry through its subsidiary SECC, as well as acting as the parent for three other subsidiary engineering businesses: Texkimp, Cygnis and Perpetual Partnerships which provide automation and bespoke machinery and technical fibre and fibre processing. The Group employs 50 people in total and recently moved into an 18,500 sq ft purpose-built factory and office premises on the New Cheshire Business Park in Wincham.

5.24 Alongside the specialist providers there is a large presence of more general civil engineering firms. These include BAM Nuttall which has its North area office located in Gadbrook Park, Northwich. Similarly, Elluc Projects, based in Lymm, provide a range of civil engineering consultancy services from site investigation, infrastructure design and associated project management.

5.25 In summary, the consulting engineering sector is particularly active in the area, with a sizeable proportion of employment supported by a series of national and multi-national companies with operations in Warrington that often serve the nuclear sector and other energy infrastructure projects. Beyond this agglomeration, there are a number of specialist engineering companies in Cheshire West and Cheshire with a cluster of notable companies in Northwich, along with EA Technologies in Capenhurst. Given central government's further investment in infrastructure projects over the next decade, it is likely that such investment will lead to further growth in this vibrant industry in Cheshire and Warrington.

Materials, instrumentation and controls

5.26 Although it is not possible to manipulate ONS data to fully drill-down into this sub-sector and appreciate whether R&D efforts are predominantly focused on engineering services, the activities of a number of key firms suggest that there is a strong emphasis on applied research to support product development, especially in the area of advanced materials, instrumentation and controls.

5.27 In regards to advanced materials, these technologies contribute to innovation in a wide range of sectors including automotive, aerospace, power generation and construction. Bodycote PLC, based in Macclesfield, is one of the leading companies in this area, particularly in regards to surface engineering technologies. It has developed a leading range of thermal spray, thermal diffusion, hot isostatic pressings and other surface technologies for the automotive, aerospace and nuclear sectors. Similarly Surface Transforms, based in Ellesmere Port, designs and makes high-performance brakes out of carbon fibre reinforced ceramic composite materials. It is one of only two manufacturers of carbon-ceramic brake discs in the world with its brakes and materials used in Formula 1 cars and military jets.

5.28 Mass spectrometry is an area of instrumentation in which there are a number of leading firms in Cheshire and Warrington. It refers to the analytical technique that measures the mass-to-charge ratio of charged particles, and is used in a range of applications including healthcare, environmental management, food safety, nuclear and water quality. Key firms include the Waters Corporation which makes innovative analytical instruments and is currently building its European headquarters in Wilmslow. This will comprise of state-of-the-art customer demonstration laboratories, R&D capabilities and an expanded manufacturing capacity, due to open in 2013 and employ over 600 people. ESS, in Northwich, is another manufacturer of high-quality Mass Spectrometer instrumentation which is used in a diverse range of applications. Hiden Analytical, in Warrington, is a leading manufacturer of quadrupole mass spectrometers for gas analysis, plasma characterisation and surface science.

5.29 While the area of controls takes in a number of technologies, one of the major companies for Cheshire and Warrington in this respect is Siemens, with its Global VSD (Variable Speed Drive) Manufacturing Hub in Congleton employing over 500 staff. This plant is the manufacturing hub for Siemens' speed drives range as well as associated research and development into drive technology. VSD technology is used in applications such as pumping, conveying, materials-handling and heating, ventilation and air products.

5.30 Other companies which broadly fall under the instrumentation and controls sub-sector include Oliver Valves, based in Knutsford with a workforce of over 100 people. The company is one of the premier needle and ball valve manufactures in the world, offering an extensive range of products which are used in instrumentation, sub-sea and pipeline technologies. Additionally, specialist companies such as Datastor Systems work closely with clients in the industrial automation sector in which it brings together equipment and software products to provide a wide range of functionality such as blending, labelling, product traceability and recipe handling.

5.31 This section suggests that there is a high intensity of R&D activity in the industry of materials, instrumentation and controls, with many of the companies mentioned positioning applied research and product development at the centre of their commercial operations. The presence of a multiple companies focusing on activities such as mass spectrometry, drive technology and controls suggests that the area has developed small concentrations of businesses, often involving SMEs, which lead niche high-tech manufacturing processes with significant export potential in business-to-business markets.

Aerospace

5.32 Cheshire and Warrington has a limited amount of employment directly linked to the aerospace sector. This is despite the fact that the area is located between the leading concentrations of aerospace activity in the UK (Airbus at Broughton and

BAE Systems at Warton and Samlesbury) and had its own aerospace facility (BAE Regional Jets were made at Woodford and prior to that the Nimrod project operated from the site).

5.33 This section has already identified that this does not show the full picture because companies such as Bodycote and Surface Transforms supply the aerospace sector. In addition companies such as Albis (UK) are likely to have links into the sector. Albis are a leading German owned resins and plastics company and employ c120 people in Macclesfield.

5.34 Nevertheless, despite the locational advantages, with the closure of BAE Systems facility in Woodford, most of the strengths in aerospace that the area could once have claimed appear to have left the area.

Engineered Products

5.35 Beyond those engineered products that can be directly attributed to a single sector, there remain a number of engineering businesses that supply engineered products for industry. The employment in this difficult to define area amounts to over 5,600 people and in the base of ‘manufacture of basic metals’ the proportion is greater than the average for England and Wales. The figures for the employment are shown in the table below:

Employment in Engineered Products in Cheshire and Warrington (BRES, 2011)

Engineered products	Cheshire East	CW&C	Warrington	Total	LQ
24 : Manufacture of basic metals	*	*	*	1,400	1.19
25 : Manufacture of fabricated metal products, except machinery and equipment	1,800	1,400	1,100	4,300	0.96
Total	1,900	1,500	2,200	5,600	

5.36 With employment of over 5,600, the sector is more important to the Cheshire and Warrington economy than the food sector, for example, with which the area is more closely identified.

5.37 This industry, which typically provides solutions to other businesses or acts as sub-contractors on larger projects, has a low profile and is often difficult to identify. One example that typifies this type of activity is Land and Marine Project Engineering which is part Daniel Contractors a civil engineering firm headquartered in Warrington. Land and Marine is a leading supplier of sub-sea pipelines to the energy sector and has recently secured contracts to build biomass power plants.

5.38 Other contracting engineers include Hertel operating from Winsford and involved in a large number of engineering solutions for energy projects and MacDonald Humfrey with a branch in Ellesmere Port. In addition, many of the construction companies operating across Cheshire and Warrington have contractors who operate in this area.

5.39 In addition to the contracting engineers there are a number of other engineering businesses operating in the area. These businesses no doubt supply the chemicals, construction, energy and machinery sectors as well as possibly the more specialist automotive and aerospace sectors. It is not intended to provide a full list but some of the companies registered in the area are:

- Calder Group – Industrial materials business, Chester
- LV Engineering – Steel tubes and pipes, Ellesmere Port
- Cook Compression – Valves, Ellesmere Port
- Promatic – Equipment for clay pigeon shooting, Ellesmere Port
- Heat Trace – cables and temperature control, Helsby
- Liquid Metering Instruments – Control equipment, Winsford
- SMS Mevac – Metallurgy, Winsford
- Boalloy – commercial vehicle trailers, Congleton
- Newfield Fabrications – Metal worked components, Congleton

- Tandom Metallurgical – metal recycling and alloy production, Congleton
- Ke-Burgmann – Expansion joints, Congleton
- Bombardier – Rail maintenance, Crewe
- CHK plc – Metal worked components, Crewe
- Oliver Valves – Valves for offshore industry, Knutsford (mentioned above)
- European Metal Recycling – Metal recycling, Warrington
- Novelis – Aluminium recycling, Warrington
- Erasteel – High speed steels, Warrington
- Rmig – Perforated steel, Warrington
- GEA Process Engineering – Equipment for drinks dispensing, Warrington

5.40 In addition, there are a large number of companies that are specialist wholesalers; distributors; designers; maintenance operators; and fitters across a range of engineered products. As mainly small scale providers of services to the engineering sector these companies are not considered individually, but combined represent a large workforce with engineering knowledge.

5.41 When the range of engineering skills is considered in total, it can be seen that Cheshire and Warrington represents an important concentration of activity. The combination of automotive; consulting, technical and testing; instrumentation and control; and engineered products for industry results in a depth of engineering skills both in actual and relative terms that is often over-looked because a more stratified or silo based approach is taken to examine sector strengths.

Professional, Financial and Business Services

5.42 Professional, financial and business services is another sector in which there is a strong performance by Cheshire and Warrington, based across all three authorities. This is particularly evident in two sub-sectors, outlined in bold: Financial service activities and activities of head offices. Both of these are outlined in more detail in the following table.

Professional, Financial & Business Services employment for Cheshire & Warrington (BRES, 2011)

Professional, Financial & Business Services	Cheshire East	CW&C	Warrington	Total	LQ
63 : Information service activities	200	300	100	500	0.59
64 : Financial service activities, except insurance and pension funding	3,900	8,800	1,400	14,000	1.72
65 : Insurance, reinsurance and pension funding, except compulsory social security	900	100	-	1,000	0.51
66 : Activities auxiliary to financial services and insurance activities	2,400	2,600	600	5,500	0.89
68 : Real estate activities	1,800	1,900	600	4,300	0.73
69 : Legal and accounting activities	3,200	2,600	1,800	7,600	0.93
70 : Activities of head offices; management consultancy activities	4,400	3,000	2,600	10,000	1.22
73 : Advertising and market research	1,600	300	100	2,100	0.87
Total	18,300	19,500	7,100	45,000	

Financial Services

5.43 Financial Services represents a high proportion of total employees in Cheshire and Warrington and covers a wide range of activities ranging from compliance, risk management, software support, contact centres to investment administration.

5.44 The area is home to a number of household names in financial services, including the divisional headquarters of one of the world's largest financial services companies, Bank of America. In particular its Europe Card Services is headquartered in Chester where 3,000 staff are employed across functions as a broad as customer support, credit card printing, insurance, treasury, fraud and risk and a wide variety of support and HQ functions. There has been some turbulence in the industry with Bank of Amerca's subsidiary MBNA announcing job losses in 2011, however the Group recently announced that it was locating a Global Technology and Operations Centre in Chester which would support the group's global banking and markets and wealth management businesses across Europe, the Middle East and Africa and will employ over 1,000 people by 2013.

5.45 Chester's strong position in financial services is further confirmed through a number of other well-known financial brands such as M&S Financial Services which is now part of the HSBC Group, but continues to operate under the M&S Money brand. This site employs 1,400 staff with activities ranging from risk, compliance and contact centre activities.

5.46 Chester is also a significant base for Lloyds Banking Group. Despite some significant recent job losses, Lloyds operates divisions which undertake car leasing in the city. These activities have become part of the Lloyds Group through a series of acquisitions but were originally concentrated in Chester as part of the Capital Bank operation which undertook car leasing on behalf of large automotive retail groups. It may be as a result of this that a number of other lease finance business have grown up around the city.

5.47 Apart from the large back-office operations of financial services companies, Chester is also a centre for the provision of financial services for its catchment area of not only West Cheshire but also North Wales. As well as large branches of the main retail banks and more significant building societies, Chester is also a base for legal and accountancy companies. National firms such as Hill Dickinson and Baker Tilly are located in the City.

5.48 Outside Chester there remains a high level of commercial activity in financial services. For instance, Barclays Bank employs over 3,000 people at its UK Technology Centre in Knutsford, albeit with recent reductions in the workforce which have been recently announced. The Centre is home to the Barclays Technology Office, Architecture and Strategy, Technology Quality and Risk, and Global Infrastructure & Service Delivery teams. Activities include software development, building and testing and support.

5.49 Close Asset Management have a site in Northwich as part of the overall Close Brothers Group which employs over 2,500 people nationally. Close Brothers advises, manages or administers over £8 billion of assets, predominantly for private clients. Another notable financial advisory practice is Perspective, with its head office in Wilmslow, the business is has numerous regional offices and is in the 'top 15 financial advisory group' offering whole of market, fee based, financial advice throughout the UK. Wilmslow is also the base for Freedom Finance (internet credit selection business) and Royal London (the UK's largest mutual life and pensions provider). Other financial advisory groups include Goldtree Financial Services and LJ Financial Planning, both headquartered in Warrington.

5.50 The area has also a number of companies that have combined financial services with ICT. These include the Alphyra Group which operates both Payzone UK which is a payment processing firm with 100 staff in Northwich which operates 25,000 credit and debit card payment processing terminals in retailers across the UK, processing more than 100 million transactions every year; and Cardpoint which is a cash machine business. Ingenico is another card payment platform provider based in Northwich; whilst Tuxedo Money Solutions has developed a pre-paid Mastercard system from its base in Chester.

5.51 Despite the turbulence of the sector as a whole in the last few years, Cheshire and Warrington remains an important location for financial service activity, with a number of corporates such as Bank of America, Barclays and M&S Financial having strategic operations in the area, in particular in Chester. While such banking giants support a significant level of employment, the diversity of the industry is underlined by the number of wealth management and financial advisory services which are active across the three authorities. Financial services activities have been an important generator of both growth and employment over the last 15 years and although there is now some momentum behind a view that the UK should re-balance its economy, the importance of financial services employment is likely to remain.

Business Services

5.52 Outside of financial services and the activities of head offices (see below), Cheshire and Warrington has a lower proportion of its workforce involved in business service type activities than is found across England and Wales as a whole.

5.53 Over the last decade larger business services companies such as call centres; shared service centres; and outsourcers have typically placed their activities in larger urban areas. As a result both Manchester and Liverpool have established a reputation as a potential location for these types of activities and fewer appear to have located in Cheshire.

5.54 In addition, operations of this type are difficult to identify. They are typically classified under a different sector (the Bet Fred call centre in Warrington is classified under gaming activities) and furthermore, the operations run by national or international groups tend not to open registered offices and are therefore difficult to identify. Businesses in the sector across Cheshire and Warrington are detailed below:

Leading firms in the Businesses Services Sector in Cheshire and Warrington

Call Centres	Shared Service Centres
▪ Talk Talk, Warrington ▪ BT, Warrington ▪ United Utilities customer support, Warrington	▪ Bristol Myers Squibb shared service centre, Chester ▪ Nalco shared service centre, Northwich ▪ Vertex, Warrington
Outsourcers	**Other**
▪ Fujitsu, Warrington & Crewe ▪ Atos Origin, Crewe & Wilmslow (although it is understood that the Wilmslow facility is at risk of closure) ▪ HP, Warrington ▪ Hero TSC, Warrington	▪ Parasol Group (umbrella management Co.), Warrington ▪ Brookson Solutions (umbrella management Co.), Warrington ▪ Project One Consulting, Congleton ▪ Mccann Advertising, Macclesfield

5.55 There a number of key employers with respect to business services, many of which have bases in Warrington and offer unique back-office / shared service provision. For instance, Parasol, launched in 2000, is an umbrella company and acts as an employer to agency contractors who work under a fixed term contract assignment, usually through recruitment agencies. Parasol provides payroll services on behalf of the contractor and provides all PAYE (Pay As You Earn) and National Insurance returns. Parasol provides services to about 47,000 employees, of which about 10,000 are registered in Warrington. The second group of clients is contractors and self-employed people who can register their company through Parasol. Over 100 people are employed at the Warrington HQ.

5.56 Similarly TalkTalk Business has key business operation in the area with its Warrington site set to become a UK hub for consumer operations. It is envisaged this centre will provide support for call-centre and affiliated services as the business launches YouView TV service later this year. Another Warrington-based business is Latitude, a digital marketing agency, that specialises in pay-per-click advertising, search engine optimisation, conversion analytics, social media optimisation, affiliate marketing and online display advertising. In total the company employs over 100 people, of which 75 are employed in Warrington and work in a number of areas including software development and production.

5.57 Business services is an exceptionally broad sector of employment and continues to generate growth in the UK economy. The business services sector is also the leading sector in the provision of foreign direct investment to the UK. With a large labour catchment area and links to the remainder of the UK, there appears to be scope to increase the business services sector in the area.

Activities of Head Offices

5.58 All three Authorities have a higher proportion of head office activities than that of the region and national average. However, this category includes a diversity of commercial operations which include typical business services such as HR, accounts and marketing, as well as strategic activities for major businesses which span a number of sectors from retail, distribution to food and drink and electrical products. A high proportion of head offices also suggest a high business start-up rate since many new-start /SME businesses will be categorised within this classification.

5.59 It is worth highlighting a number of the organisations who have their head offices in Cheshire and Warrington, in particular in Cheshire East in which some of the most notable holding companies are involved in wholesale, distribution and logistics. For example Marlowe Holdings is involved in the wholesale and distribution of electrical products in which it has numerous subsidiary companies operating nationally including Edmondson Electrical which is the leading distributor of electrical equipment to trade and industry in the UK. Similarly the NWF Group is responsible for the distribution of a number of agricultural products through its subsidiary companies, notably Boughey Distribution which is one of the UK's largest ambient grocery distribution and warehousing storage specialist with over 600 staff, 1,000,000 sq ft of warehousing and 150 fleet of vehicles. Finally, The Fayrefield Group is engaged as traders in dairy products, through its Fayrefield Foods subsidiary.

5.60 Away from distribution, many of the holding companies based in the area are involved in retail, travel and leisure. For example KKR My Best Friend is the overall operator of Pets At Home, which is the market leader in providing pet supplies, pet food, toys and accessories. Lightcatch is the overall operator for the Done Brothers group of gambling operations including BetFred with its headquarters in Warrington, as well as owning the sports tourism business Sports Tours International. Holidaybreak Plc is another large holding company which has over 15 long-established brands with niche positions in the travel sector including education travel business PGL, NST and Meininger, as well as Eurocamp, Keycamp, Superbreaks and Explore adventure holiday. Its headquarters at Hartford Manor near Northwich houses the "plc office" and the brands of the Camping Division, Eurocamp and Perfect Places. Another large operation headquartered out of Cheshire East is Four Seasons which is a business now under private equity ownership operating residential care homes.

5.61 There is also a number foreign owned companies with their UK headquartered operations in the area. In Warrington, this includes the UK HQ of sports shoes manufacturers, Asics and New Balance. Other HQ operations include Phonak UK, a subsidiary of Sonava, the Swiss owned world's largest manufacturer (by sales) of hearing systems and UK HQ of MWH, a US owned global engineering company.

5.62 Activities of head offices is one of the most difficult industries to fully analyse as it pulls in both the holding companies of significant corporate organisations (often with many subsidiaries and operations not co-located with the HQ); as well as a large number of small consultancies, advisory businesses and other SMEs involved in business services which are often recognised as head offices. However, despite the wide spectrum of activity included in the sector, a pervasive feature of the industry is the concentration of management and executive operations which is likely to result in high-value employment.

Life Sciences, Food & Drink and Chemicals

5.63 Cheshire and Warrington performs well across these three 'science-intensive' industries. However, unlike engineering and financial services, the individual authorities tend to have their own unique strengths in this regard. The clearest disparity is the strength of the chemicals sector in Cheshire West and Chester, which is linked closely to the production of petrochemicals, contrasted with the dominance of pharmaceutical activities and life sciences R&D in Cheshire East. Food and Drink production on the other hand has a relatively similar presence across all three authorities with 1-1.5% of total employment working in this sector in each district. The only exception is the manufacturing of beverages in Warrington which has a notably high LQ which is reflective of the presence of the Greenalls Group as well as some brewing activity (Thomas Hardy Breweries).

Life Sciences, Food & Drink and Chemicals employment for Cheshire & Warrington (BRES, 2011)

Professional, Financial & Business Services

	Cheshire East	CW&C	Warrington	Total	LQ
10 : Manufacture of food products	2,300	2,100	1,100	5,500	1.05
11 : Manufacture of beverages	-	-	200	300	0.57
19 : Manufacture of coke and refined petroleum products	*	*	*	900	4.91
20 : Manufacture of chemicals and chemical products	700	2,600	800	4,100	2.47
21 : Manufacture of basic pharmaceutical products and pharmaceutical preparations	1,900	100	-	2,000	2.98
23 : Manufacture of other non-metallic mineral products	800	900	100	1,800	1.44
Total	5,800	6,400	2,300	14,400	

5.64 Leaving aside the spatial variation in sector strengths, the area as a whole performs particularly well in a series of sub-sectors, namely manufacturing of chemicals, pharmaceuticals and associated research and development, all of which employ a significantly higher proportion of the total workforce than the North West and England and Wales. The sub-sectors are considered in turn below:

Pharmaceuticals and associated R&D

5.65 It is estimated that over 6,500 people in Cheshire and Warrington work across industries referred to as Life Sciences, which corresponds to 1.5% of the overall employment base. As documented, Cheshire East is a particular hot-spot with over 5,000 of total employees in the sector, which can be largely attributed to the operations of AstraZeneca. Indeed, the global pharmaceutical company has a major presence within the local authority with Alderley Park housing AstraZeneca's largest R&D site worldwide along with a number of business support functions. It also has its second largest manufacturing site in Macclesfield, where there are additional R&D facilities. Recent difficulties in trading performance and announced job losses have reduced activities on site but nevertheless it represents one of the most important company operations in the Cheshire and Warrington economy.

5.66 While AstraZeneca represents a significant proportion of life science employment, there are number of other companies which are undertaking specialised and valuable activities in the sector. In particular, the Advanced Medical Solutions Group is a UK company developing and providing leading edge technology to the global wound care and wound closure markets. In 2011, the company opened a new world-class facility in Winsford which incorporates offices, laboratories and warehouse which represent a major upgrade of the operational capability of the wound care business.

5.67 Sanofi is another pharmaceutical business located in Cheshire East. Sanofi is a diversified global healthcare company with business lines including pharmaceuticals, consumer healthcare, generics, vaccines and animal health. Sanofi has a site in Holmes Chapel which is the company's centre for inhalation and nasal sprays from which it supplies worldwide markets including the US and Japan.

5.68 Other important specialist pharmaceutical companies with operations in the area include Peckforton Pharmaceuticals in Crewe, which produces both branded and hospital products for the treatment of IBS, heart-burn and other infections, Sinclair Pharmaceuticals manufactures supportive care, wound care & dermatology solutions to hospitals and general practitioners and has a site in Chester.

5.69 There are also a number of businesses who are involved in the growing biomedical sub-sector of the wider life science industry. For example, Life Technologies is a US owned global biotech company, specialising in DNA sequencing, molecular medicine, stem cell-based therapies, food safety and animal health and forensics with a key manufacturing operation in Warrington. This is the only site for the manufacture of hepacotyte cells (liver cells) in Europe and employs over 130 people. Phenomenex (a US chromatography specialist) also based in Macclesfield supplies products to the pharmaceutical industry.

5.70 Another business which uses biomedical techniques to aid pharmaceutical testing is Cyprotex based in Macclesfield. This small company uses biomedical techniques to aim to shorten the testing period and testing costs of new pharmaceutical products. Medtrade are a similarly small company involved in wound treatment and clotting technology and based in Crewe.

5.71 There also a number of firms in the area which form part of the complex supply chain which characterises the life sciences sector. For example, Instrumentation Laboratory in Warrington provides analytical systems which are subsequently used in laboratories to analyse patient samples to quantitate clinically important parameters such as enzymes, proteins and antibodies. Likewise, Thermo Fisher Scientific are supplier of laboratory equipment and supplies, while its HQ is in Loughborough, it has an important site in Winsford.

5.72 Two potentially interesting companies for the future are Claris Lifesciences (Crewe) and Lupin Europe Ltd. (Knutsford). These are both Indian pharmaceutical companies that have selected Cheshire East for European representative offices. This is another example of Indian investment arriving in Cheshire and Warrington in a manner that has perhaps been under-reported.

5.73 Life sciences are frequently identified as a growth area for both the UK and the North West region and with this Cheshire and Warrington can make a strong case to be involved with those companies that wish to develop in the sector. The long-standing presence of AstraZeneca has contributed to the large proportion of employment in the production of pharmaceuticals, in which it has important R&D and manufacturing facilities. Likewise, Peckforton and Sinclair Pharma add to a notable pool of businesses involved in traditional pharmaceutical manufacturing. The long-standing presence of AstraZeneca (and its predecessors) in Alderley Edge has however not resulted in a large number of spin-out businesses. This may reflect the fact that universities are typically involved in bio-pharma start-ups and the concentration of activity plus support that the sector receives at the Universities in Manchester, Liverpool and to some extent Keele may have reduced the ability of Cheshire and Warrington to secure more investment from the sector.

Food and drink

5.74 Cheshire and Warrington employs over 5,500 people in the food and drink industry, which in gross terms is a sizeable workforce, equating to 1.3% of total employment across the three authorities. However, it is only marginally higher than the national average which gives it a location quotient of 1.1. This suggests that the area does not benefit from a particularly strong comparative advantage in relation to the rest of the country regarding the manufacturing of food and drink. In fact, a parallel study to this report on the sectors of Cheshire and Warrington demonstrates that neighbouring North Wales employs a greater number of people (in excess of 6,600) in a smaller overall economy.

5.75 Nevertheless the sector does employ a large number of people and there are number of important businesses registered in the area. The table below illustrates the number and breadth of businesses registered in Cheshire and Warrington. This analysis is likely to miss some of the employers who are registered elsewhere but undertake some activities within Cheshire or Warrington. The larger registered businesses include:

Name	Location	Activity
Meadow Foods	Chester	Dairy
Ungerer & Co	Chester	Flavours, oils and essences
Aviagen	Chester	Poultry
Nutriad	Chester	Livestock feed
Cogent Breeding	Chester	Stud farming
Barry Callebaut	Chester	Chocolate manufacture
Uren	Ellesmere Port	Prepared organic fruit
Glanbia	Northwich	Cheese
Trouw	Northwich	Poultry feed
Frank Roberts	Northwich	Bakery Products
Tithebarn	Winsford	Livestock feed
Greencore	Warrington	Convenience foods
Goodlife Foods	Warrington	Prepared vegetarian foods
Massey Bros (Feeds)	Holmes Chapel	Livestock feed
John Morley	Congleton	Baking ingredients
Freshpack	Congleton	Frozen savoury products
Fayrefield Group	Crewe	Food brand management
NWF Agriculture	Crewe	Livestock feed

Morning Foods	Crewe	Oat milling and cereals
Dairygold Food Ingredients	Crewe	Dairy / Cheese
Joseph Heler	Nantwich	Dairy / Cheese
HST Feeds	Crewe	Livestock feed
E. Park & Sons	Macclesfield	Processing and preserving of potatoes

5.76 The table shows that the food sector in Cheshire has a number of companies, mostly independent and has secured few inward investors. The sub-sectors represented are diverse but there are a number of animal feed businesses and also a number of dairy operators. The dairy sector was synonymous with Cheshire in the past and some of the activity remains although there are now other substantial dairy operators in neighbouring North Wales and Shropshire.

5.77 Another large business in the sector which is now owned by the Morrison's grocery business is a 105,000 sq ft fresh pork and lamb retail packing plant in Winsford. This is the former Grampian Country Pork business which was part of the large acquisition by Vion but was a disposal to Morrison's as part of Vion's post acquisition rationalisation of their business. This is an interesting business because it is an example of the trend of grocery multiples examining opportunities to control their supply chain. In fact Morrison's is one of the largest fresh food producers (as well as retailers) in the UK.

5.78 On the basis that food has been recognised as an important sector in Cheshire for a number of years and is supported by knowledge assets such as Reaseheath College, this report has explored the breadth of other food businesses which are located within Cheshire and do not appear as large registered businesses. Some of these businesses are listed below:

Mobberley Eggs, eggs, Knutsford	SD Parr & Co, fruit ingredients, Winsford
Darlington and Daughters, preserves, Crewe	W. Hodgson, natural oils, Congleton
Reeces, cheese, Malpas	Essential Cuisine, stocks and sauces, Winsford
Galloway Patisserie, cakes, Chester	Victoria Foods, bakery mixes, Macclesfield
Rigest Trading, ingredients, Middlewich	English Provender, sauces, Chester
Solutech, ingredients, Winsford	Nicco Foods, prepared food products, Winsford
Cheshire Smokehouse, Wilmslow	

5.79 This list largely demonstrates that despite the growth of brands and bulk purchasing by grocery multiples, it remains possible to operate a relatively small food business in the UK and these businesses continue to be a source of business start-ups across Cheshire. Winsford also seems to have a small concentration of such businesses.

5.80 The conclusion is, therefore, that food is an important employer in Cheshire and Warrington, responsible for employing over 5,500 people. The concentration of activity is only marginally higher in Cheshire and Warrington than for the remainder of the UK. The industry appears to be typified by indigenous businesses many of which are small or medium in size. A few international businesses have placed (or acquired) operations in Cheshire and Warrington but where this has happened the businesses appear to be satellite operations rather than significant centres of excellence within the group concerned. Whilst Cheshire has long been recognised as an important centre for food, any relative strength is diminished and there are other sectors which make a more significant contribution to the economy of Cheshire.

Chemicals

5.81 Over 5,000 people work in the chemicals industry in Cheshire and Warrington which represents almost 1.2% of total employment in the region. This is double the proportion for Great Britain and significantly higher than the North West region in which chemicals comprises 0.8% of jobs.

5.82 When the three related industries of chemical production, petroleum refining and manufacturing of 'other non-metallic mineral products' (which includes salt related activity) the combined employment across Cheshire and Warrington amounts to almost 7,900 and this represents 2.4 times the concentration of similar activity across England and Wales as a whole.

5.83 The chemical industry is possibly one of the most established industries for the area, going back centuries with the mining of salt in the area around Northwich and Middlewich. This historic activity has led to a well-developed chemical industry due to its wide use in chemical feedstocks, as well as the continued presence of large firms involved with salt mining including Salt Union and British Salt which are both in the largest 30 firms in the area in terms of turnover.

5.84 Alongside salt mining, petrochemicals have been refined for many years in Cheshire and Warrington. Much of this activity takes place at the Stanlow Refinery in Ellesmere Port. Historically operated by Shell, Essar Energy acquired the oil refinery and other associated assets in 2011. The refinery has a nameplate capacity of 296,000 barrels of oil a day and supplies approximately one sixth of the UK's petrol, as well as being a key manufacturer of diesel and aircraft fuel. Employing almost 1000 staff, Essar has confirmed it is to invest £62m a year on maintenance to keep the refinery up to standard and operating at near full capacity. Petrochemicals remain an important feedstock in many downstream chemical products.

5.85 Along the Mersey estuary from Stanlow is the Growhow fertilizer business which is the largest company registered in Ellesmere Port by turnover. This large facility is the Group's main operation and was part of an acquisition from the Finnish Group Kemira. Ellesmere Port is also a significant base for the fuel additives business Innospec which has a long-standing investment in the area.

5.86 Tata Chemicals is another of the largest employers. The Indian conglomerate acquired the former Brunner Mond site in Northwich, which produces a variety of chemicals from soda ash to calcium chloride which is used as a feed-stock for other applications including glass production. Additionally the company has invested in new premises with an 18,000 sq ft building at Tata's Winnington complex which will act as their European headquarters.

5.87 Winsford hosts a number of important chemical companies. Firstly, Henkel Consumer Adhesives is a global company specialising in adhesive technologies which produces consumer adhesives and employs over 450 people. Britton Taco is one of Europe's leading polyethylene based film producers and its Winsford plant is the UK's largest single film extrusion site. The company is part of the Britton Group which employs over 600 people across its three sites. Finally, Flexfilm is the UK prime specialist polyethylene extruder and operates from a purpose built 20,000 sq ft factory. The company supplies film throughout the UK and to other EU countries.

5.88 Thor Specialities has an active manufacturing plant at Wincham with plans announced to acquire and invest £2.5m on an adjacent site currently occupied by the Northwich Victoria's stadium. Thor's activities centre on the production and supply of a wide range of biocides, flame retardants and personal care ingredients which can be found in a variety of industries from newspapers to cosmetics, construction and fashion. Moving eastwards, Harman Technology has its headquarters in Mobberley, Knutsford in which it develops specialist products for the professional imaging industry and employs over 400 people.

5.89 In Middlewich, Genesys International has its headquarters, manufacturing and development laboratory which makes highly-specialised chemicals which are crucial to the smooth running of reverse osmosis plants, which turn seawater into clean drinking water. Its innovative product line was rewarded in 2011 with a Queen's Award for Enterprise in the international trade category and a North West Regional Chamber of Commerce Award in international business. Another Middlewich-based company is PennWhite which manufactures and distributes an extensive range of chemical products for diverse applications in a number of industries. The company moved from its existing Congleton site due to sustained growth which required a larger premises. Finally, Centec International completes a trio of chemical companies based around Middlewich. It is an independent chemical company offering a wide range of facilities for the production of bulk and fine chemicals for a number of industries as well as undertaking solvent recovery to enable purity within various raw materials.

5.90 Warrington is also a significant centre for the industry with plants operated by amongst others Unilever (detergents), PQ Silicas (catalysts), United Phosphorus has its UK HQ in Warrington and manufactures in Sandbach (agrichemicals), and Solvay Interox operates a large speciality chemical and chemical feedstock facility in the town.

5.91 Further south, Crewe represents an important centre for Air Products. Crewe is the UK Head Sales Office for the company and also the location for UK cylinder gasses and liquid bulk gasses as well as general UK enquiries. The facility is responsible for the employment of 400 people.

5.92 Beyond these significant businesses, there is a tail of smaller companies involved in detergents, oils, fragrances, adhesives, resins, plastics, flavours, edible oils, essences and other specialist ingredients. The industry supports a range of other businesses such as significant numbers of maintenance engineering contractors, small engineering firms, effluent treatment businesses, waste handling firms as well as R&D, safety and risk consultancy, accreditation organisations etc.

In keeping with all manufactured products the industry also creates demand for packaging companies and transport businesses.

5.93 The chemical industry is not uniquely focused on Cheshire and Warrington. The sector extends significantly into Halton to the east and Flintshire to the west. Greater Manchester also contains a number of speciality chemicals businesses.

5.94 In the recent past chemicals has represented something of a Cinderella industry in economic development terms. New investment has typically been focused on growth locations in Asia where costs and regulatory burdens are lower. The large scale sunk capital investment in large scale plant in the UK has in many cases been traded between Groups with these acquisitions often having an emphasis on cost reduction. Any growth in existing facilities or the creation of new sites can also create challenges for Planning Authorities. Despite these issues and the perhaps limited opportunities to attract new large scale operators, the industry is very important to the area, sustains a large number of jobs, represents a nationally significant concentration and at the very least has the ability to secure follow on investment by existing players. The acquisition of Brunner Mond (Tata); Stanlow (Essar) and United Phosphorus by Indian companies and their subsequent investment in the facilities is an interesting and very important development.

Energy and Environment

5.95 In reality, this is an umbrella sector which brings together a host of activities across a number of industries in order to deliver services related to energy generation and transmission and associated environmental services. With this, many of the strengths which have already been identified in Cheshire and Warrington also have an application in this sector. Nonetheless, it is important to highlight the critical mass of activity taking place which can be characterised as energy & environment.

5.96 The following table highlights the proportions of employment in the key sub-sectors which constitute the energy and environment industry. Particular strengths exist in the supply of utilities themselves, but given our understanding of the nature of activities within engineering, R&D and professional services in Cheshire and Warrington, it is applicable to include associated activities in this regard.

Energy and environment employment in Cheshire and Warrington (BRES, 2011)

Energy and environment	Cheshire East	CW&C	Warrington	Total	LQ
35 : Electricity, gas, steam and air conditioning supply	1,300	100	600	2,000	1.23
41 : Construction of buildings	1,500	1,600	1,300	4,400	0.91
42 : Civil engineering	1,100	1,400	900	3,500	1.12
43 : Specialised construction activities	3,200	3,200	4,300	10,800	1.08
71 : Architectural and engineering activities; technical testing and analysis	3,000	2,200	4,700	9,900	1.65
Total	10,200	8,500	11,900	30,600	

5.97 Ultimately the nature of the SIC code framework means that the key sub-sectors are not captured through ONS data. With this, the following sub-sectors have been identified based on consultation with key employers and economic development officers to ensure a representative account.

Nuclear

5.98 The prominence of the nuclear industry in Cheshire and Warrington is a notable example to demonstrate the diversity of sub-sectors coming together to work actively in a key form of energy generation nationally. Key companies such as Sellafield Ltd, Urenco, National Nuclear Laboratory, AMEC Nuclear and Rolls-Royce Nuclear are all strongly represented and concentrate on the area of design engineering and R&D activities for the industry, despite their diverse backgrounds:

- Urenco in Capenhurst, near Chester, operates out of three plants producing enriched uranium for nuclear fuels, the highest value added segment of the nuclear supply chain.

- AMEC Nuclear has its nuclear R&D centre located in Warrington. It is supporting EDF's architect engineering operation for the proposed delivery of four new EPR (European Pressurised Water Reactors) nuclear reactors at Hinkley Point and Sizewell.

- Sellafield Ltd has a significant presence in Warrington where its Nuclear Engineering Design Centre is located as well as other functions. Sellafield Ltd. is itself made up of the companies URS, AMEC and Areva. The Company is responsible for decommissioning activity at the Sellafield site in Cumbria and operating the portion of the Capenhurst site owned by the Nuclear Decommissioning Agency. Capenhurst is undertaking a large amount of repackaging of spent nuclear materials and is establishing itself as a site with export potential.

- Rolls Royce Nuclear is involved in the production of a large number of components for the nuclear industry including control systems, remote vision systems and steam generation products. The Warrington site is focused on Design Engineering for nuclear new build. The company has formed a relationship with the leading nuclear station provider – the French Group Areva. Areva are also represented in Warrington.

- National Nuclear Laboratory have their headquarters in Warrington and are involved in modelling and simulation, engineering, project management, corporate functions and the environmental impact of nuclear.

5.99 Many of the consulting groups represented in Cheshire and Warrington are actively involved in the nuclear industry and these companies are set out in the table above (Consulting Engineering). In addition there are a number of risk and safety consulting groups who operate across energy sectors. These include:

- Risktec Solutions, Warrington
- MMI Engineering, Warrington
- Risk Solutions, Warrington
- RPS Group, Warrington
- Areva Risk Management, Warrington
- ABS Consulting, Warrington

5.100 The strength of the nuclear sector will continue to be important for Cheshire and Warrington over the next few years. The scale of the decommissioning programme will assure that this is the case. Nuclear new build is also likely to create large scale opportunities in the sector and Cheshire and Warrington can become a focus for this activity. New build is currently in some doubt after the announcement that Horizon Nuclear Power would pull out of the UK new build programme. The longer term view, however, is that despite this setback (Horizon were the most advanced of the new potential operators in terms of building new facilities) new nuclear will create further opportunities.

Utilities Supply

5.101 Cheshire and Warrington is an important location for electricity transmission and associated utilities. United Utilities is based in the area with responsibility for water, wastewater and electricity supply. Electricity North West, headquartered in Warrington owns operates and maintains the North West electricity distribution network which connects more than five million people to the National Grid.

5.102 Expertise also includes the manufacture of sensors, switchgear, medium and low voltage control systems. For example, Schneider Electric has a number of operations in Cheshire and Warrington, including its North of England Medium Voltage Division and the regional (North and Scotland) headquarters of the Buildings Business Division (North and Scotland). The Boulting Group, headquartered in Warrington specialise in electrical systems engineering to the power generation and renewable energy industries. This includes the design, fabrication and manufacture of low voltage switchgear.

5.103 EA Technologies, headquartered in Cheshire West and Chester, are particularly important company when considering the utilities supply industry. The employee-owned company provides high-tech instruments, software, electrical services and technical consultancy to the operators of power networks globally. Alongside providing bespoke instruments to solve technical faults within the grid, EA Technology provides bespoke technical and consultancy services to energy-intensive industries and energy retailers.

5.104 The required investment in electricity generation in particular and the development of the national grid to adapt to the changing nature of supply (and use) will drive large scale investment in the sector. Investment in smart grid technology is likely to generate significant growth for the sector.

ICT

5.105 When considering the UKTI framework, there are a number of sub-sectors which have a strategic importance at the national level but in which Cheshire and Warrington does not present a particularly strong offer in terms of level of either employment, location quotients or business demography (as outlined in the authority reviews). One such sector is ICT.

5.106 ICT has been a clear driver for the UK and Global economies and is a crucial element within many of the industries already considered in this report. ICT enabled businesses are often difficult to separate from ICT businesses themselves (eg web-based providers of services) but when the ICT sector as defined by the Office of National Statistics is examined for Cheshire and Warrington the sector, whilst employing a large number of people (over 11,500 people), does not represent a particular strength relative to the proportions of employment across England and Wales as a whole. This is outlined in the following table:

Information Communication Technologies

ICT employment in Cheshire and Warrington (BRES, 2011)

ICT	Cheshire East	CW&C	Warrington	Total	LQ
26 : Manufacture of computer, electronic and optical products	300	300	400	1,000	0.52
27 : Manufacture of electrical equipment	100	200	300	600	0.44
61 : Telecommunications	600	600	1,700	2,900	0.89
62 : Computer programming, consultancy and related activities	3,500	1,400	1,800	6,800	0.87
63 : Information service activities	200	300	100	500	0.59
Total	4,800	2,700	4,200	11,800	

5.107 The most important sub-sectors in terms of absolute and relative employment across Cheshire and Warrington are computer programming and telecommunications.

5.108 Within the telecommunications sector, in addition to investments by BT, Warrington is also the headquarters of the Talk Talk Business division whilst 20:20 Mobile are based in Crewe and are a part of the now separated Caudwell Group of mobile telephone businesses albeit the Company is mainly focused on the distribution of mobile telephones.

5.109 The electronic and electrical sector has a few businesses operating in the area which include the specialist electrical contractor the Rosebery Group based in Ellesmere Port and the Boulting Group, mentioned elsewhere. The Warrington based business J2 Retail provides LCD touchscreen monitors and point-of-sale hardware to the retail and hospitality sectors.

5.110 There are a number of employers involved in software. These include Martin Dawes Systems (MDS), which was formed from the IT division that spun-out of Martin Dawes Communications following its sale to O2 in 1999. MDS client base is focused on the telecoms industry. MDS provides integrated back office software solutions, including billing, CRM and analytics systems. The company is headquartered in Warrington which is also home to its R&D centre.

5.111 CSC, a major US owned software company which in total employs over 98,000 people and serves a number of key sectors including financial services, automotive and aerospace has an operation in Warrington specialising in healthcare software.

5.112 Meanwhile Barclays Bank, as outlined as part of the financial services summary, employ over 3,000 people at its major technology centre in Knutsford. This operation involves a number of activities ranging from software development, building and testing and support.

5.113 Smaller software operations across Cheshire and Warrington include Datel in Warrington which provides support to Sage users; Chess Ltd which provides logistics software from a base in Macclesfield and Cleric Computer Systems based in Congleton which provides logistics and business operations software. Also based in Congleton are Galleria Retail (retail support software) and Websense Hosted which provides protection software and is part of a large US Group. GB Group is based in Chester and provides customer segmentation software, ASM provide supply chain software and are based in Winsford and Comms-care is an IT support specialist based in Northwich.

5.114 An example of an ICT enabled company that is likely to be classified as a retailer is the large online retail business, the Hut Group. Based on Gadbrook Park in Northwich, the Company was founded in 2004 and won the Sunday Times Techtrack Award in 2009. The business was formed by two colleagues from the Caudwell Communications Business (Matthew Moulding and John Gallemore).

5.115 Beneath these groupings of companies, the ICT will also employ probably hundreds of sub-contractors, individual consultants and micro businesses that will be involved in a wide range of applications and will have been missed by an analysis of larger registered businesses.

5.116 Neverthless, ICT represents an industry which has grown considerably, continues to offer significant potential for further massive growth and in which Cheshire and Warrington does not demonstrate particularly notable strengths. This is somewhat surprising since many of the key attributes required by the industry are present in terms of university access, national and international connectivity, business customer base, adequate infra-structure, educated workforce and a living environment that can offer a number of different lifestyles.

Paper and Packaging

5.113 Whilst outside of the UKTI framework for the consideration of sectors, the paper and packaging industry is worthy of note within Cheshire and Warrington.

Paper and packaging employment in Cheshire and Warrington (BRES, 2011)

Paper	Cheshire East	CW&C	Warrington	Total	LQ
17 : Manufacture of paper and paper products	700	200	-	1,000	1.27

5.114 Not only does the sector employ a greater concentration of people in paper and paper products than England and Wales as a whole, including significant employment in companies such as Disley Paper (within the Kruger Group) and Tullis Russell in Bollington, but there are a number of packaging companies in the area.

5.115 These packaging companies do not exclusively use paper and therefore will involve further employment beyond the c1,000 employed in the paper industry.

Sector Review *cont*

5.116 The companies include API based in Macclesfield, International Paper based in Winsford. Also located in Winsford are Linpac and Ambassador Packaging. Macclesfield is a base for Proseal and Packaging Automation. Ball Packaging are based in Chester along with Lendlock Packaging and Nekem. Greif manufacture drums for chemicals in Ellesmere Port and elsewhere in Cheshire West there are also operations for companies such as Britton Group, Pregis Protective Packaging, Flexfilm and Multi-plastics.

5.117 Whilst not paper or plastics, Quinn Glass also represents an important packaging company. The Company has a large glass bottle manufacturing plant and bottle filling facility located in Ince where over 500 people are employed. The site has 21 production lines and a 13 acre automated warehouse. The Group has suffered some financial difficulties but the site represents the most up to date major glass bottle line in the UK.

5.118 The sector is not particularly high profile and is perhaps unlikely to generate significant economic growth but the industry is important to the area and is a downstream activity resulting from the wider manufacturing base in the area – particularly food, pharmaceuticals and chemicals.

Knowledge Resources

Introduction

6.1 Against the activities of employers in Cheshire and Warrington, and in particular those employers involved in knowledge based industries, it is useful to consider the knowledge resources that they may draw upon and the impact that these resources may have on company activity.

6.2 This section therefore considers:

- Universities and their strengths
- Knowledge intermediaries

Universities and their Strengths

6.3 Both the University of Chester and Manchester Metropolitan University have a presence in Cheshire and Warrington, alongside Reaseheath College which has a particular specialism in land-based studies. The strength of these knowledge assets will be reviewed in turn before exploring the importance of neighbouring higher education institutions of Manchester, Liverpool, LJMU and Keele University in providing knowledge capabilities which have the potential to support industries within Cheshire and Warrington.

University of Chester

6.4 Until the late 1980s teacher training remained the principal activity, when the University of Chester, then Chester College, began to broaden its range of programmes, including, nursing and midwifery from 1991, and the establishment of the Chester Business School in 2000. The commitment to work-based learning dates back to the 1980s when a module for all undergraduates was introduced. Merging with the higher education provision of Warrington Collegiate Institute in 2002, Chester College established Warrington as an additional campus.

6.5 Previously accredited by the University of Liverpool, the then Chester College received taught degree awarding powers in 2003, followed by the conferral of university title in 2005. There are currently 16,800 students enrolled at the University, of which approximately ten per cent of students are based at the Warrington Campus and a further eight per cent are enrolled on Chester programmes in partner colleges of further education in the region. The majority of the students are undergraduates and taught postgraduate students. However MPhil and PhD qualifications are a growing area of activity, with the University having been granted the powers to award its own research degrees in 2007.

6.6 There are currently seven faculties: Applied and Health Sciences; Arts and Media; Business Enterprise and Lifelong Learning; Education and Children's Services; Health and Social Care; Humanities; and Social Science. The University has also developed significant provision in work-based learning which works in response to employer demand.

6.7 In terms of its knowledge offer to industry, it has a number of projects and initiatives which are relevant to the priority sectors as outlined in the earlier chapters. This includes:

Energy and the environment

6.8 The University has specialisms in Environmental Diagnostics, offering testing and analytical services that use both commercially available assays and bespoke designed systems. Capabilities include biological indicators of pollution, carbon reduction awareness campaigns, the use of GIS and Geo-conservation. Furthermore, the Environmental Quality and Food Safety Research Unit has been established to develop tools and techniques necessary to evaluate and protect environmental quality and food safety. The Unit seeks to improve understanding of the relationship between environmental quality and food safety and contribute to the protection of human and animal health

Financial and business services

6.9 Chester Business School is based at both the Chester and Warrington campuses offering Business, Management and Strategy, Marketing, Finance and Human Resource Management. A wide range of expertise includes collaborative research, consultancy and Organisational and Professional Development. Chester Business School is a member of the European Foundation for Management Development (EFMD), which provides networking opportunities with international business schools and companies worldwide.

Creative and Digital

6.10 The North West Media Centre (NWMC) based at the University of Chester's Warrington Campus has a wide ranging portfolio of industry-responsive undergraduate and postgraduate programmes aimed at developing thinkers and practitioners for the creative and digital sectors. Additionally, the University's School of Computer Science, Mathematics and Business Computing has grown considerably over the last 25 years. It offers postgraduate courses including BSc in Computer Science, BSc in Information Systems Management and MSc in Information Systems.

Life Sciences

6.11 The University of Chester has recently developed a foundation degree in Biomedical Process Technology in which modules have been developed with specific industrial input. Furthermore the University, in association with the New Technology Initiative (NTI), has become a lead member of the Leadership and Management network and is one of only two Higher Education Institutions in the UK that is an Approved Training Organisation for PRINCE2® Project Management, which aligns with the content of the course in that it includes key skills in project management in biomedical processing.

Food and Drink

6.12 The University is particularly active in this area. It is currently delivering workshops to SMEs as part of an ERDF project Explore Food and Drink in which the university focuses on two core areas of training: Rapid analysis of food, feed and ingredients, and craft brewing. Moving forward, a new Food Innovation Centre opening in 2013 will offer leading nanotechnology, rheology, chemistry and microbiology labs tailored to the needs of the food industry. A large industrial kitchen area is planned to allow product development, showcase new equipment and processes, while a sensory suite will test customer appeal. The Centre will also provide Accelerator units to stimulate new business, product and process development with expertise on hand from the academic core of the University.

Cross-sector enterprise & innovation support: Riverside Innovation Centre

6.13 Established by the University, the Riverside Innovation Centre is an incubation and ideas accelerator space with hot-desking, incubation units, on-site business support and events and conferencing facilities. It is to be launched formally in Spring 2012 with the objective of growing and nurturing start-ups and SMEs through a combination of flexible and reasonable workspace with accessible and tailored support services.

Manchester Metropolitan University (Crewe campus)

6.14 The Cheshire campus of MMU predominantly focuses on education, performance, sports science and business and management. It has two Institute of Performance research centres: Sport, Exercise and Physical Activity and Performance Screen and Media, which contributes to the university's overall expertise in digital media. Ultimately the majority of MMU's research, innovation and business engagement activities are focused in Manchester.

Reaseheath College

6.15 Reaseheath College is a leading specialist land-based College in the UK, near Nantwich. With college grounds of 21 hectares and owned and rented farms equating to an additional 330 hectares, it has student population of over 1,000 and delivers a number of courses focusing on agriculture, equine studies, horticulture and business and management. However, its importance as a knowledge asset to Cheshire and Warrington is largely the result of its position as an international training centre of excellence for the food and drink manufacturing industry. Through collaboration with food industry leaders and government it has developed the Eden International Dairy Academy and the Food Innovation Centre.

University of Liverpool

6.16 The University of Liverpool is a research-based university with 18,000 students pursuing over 400 programmes spanning 54 subject areas. Its three faculties – Health and Life Sciences, Humanities and Social Sciences, and Science and Engineering – are organised into 35 departments and schools. It is active in collaborating and engaging with businesses across a number of sectors of importance to Cheshire and Warrington. In terms of energy and the environment, the university's Robert Stephenson Energy Institute is undertaking research and collaborative projects exploring fuel cell technology, harvesting solar energy, wind and marine energy, new fission technologies, fusion technology, nuclear waste transmutation, bio fuel technology, fossil fuel technologies, energy dissipation and friction, hydrogen storage, climate impact and change. Similarly, it has a radiometric research group specialising in instrumentation and modelling, which is used in environmental and energy analysis.

6.17 In regards to life sciences, the University of Liverpool, alongside Liverpool School of Tropical Medicine and other biomedical research groups are working on scientific and practical responses to many of the world's most serious health challenges, including HIV and other retroviruses, malaria and obesity. Important areas of strength and further opportunity include tropical medicine, oncology, and microbial infections, sports science and public health. In particular, the Biomedical Research Centre in Microbial Disease is based in Liverpool with strategic partners including the University of Liverpool, Liverpool School of Tropical Medicine and Liverpool Primary Care Trust.

Liverpool John Moores University

6.18 The tenth largest university in the UK, LJMU has 25,900 students in Liverpool plus a further 4,500 students enrolled on accredited LJMU courses around the world. In 2007, LJMU launched its World of Work initiative, a unique approach to higher education which places industry and employer engagement at the heart of the student experience and delivers research that is designed to have a real impact on the economy.

6.19 Relevant programmes and initiatives to the leading sectors in Cheshire and Warrington include The School of the Built Environment's BEST Research Centre in Built Environment and Sustainable Technologies. The research landscape at BEST ranges from applied research, closely linked to medium-term industry requirements through to highly theoretical 'blue-skies' research, aimed at addressing longer-term needs of the industry knowledge base. Its research focuses on three key themes: Sustainable Technologies, Planning and Development and Construction and Facilities Management. A key research area at BEST is the recycling of building materials, including using scientific and engineering expertise to break down materials into core components, removing polluting substances and creating a fresh aggregate to make new building materials.

6.20 As for life sciences, the university's Institute for Health Research provides a cross-faculty structure for all of the university's health and health-related research. IHR researchers have brought forward major innovations in non-invasive medical devices, drug delivery systems, infection control therapies and wound-healing products. Some of these products have been taken to market through spin-out companies.

University of Manchester

6.21 The University of Manchester is the largest single-site higher education institution in the UK and has student population of almost 40,000 of which 28,000 are undergraduate, 7,500 are postgraduate taught and 3,500 are postgraduate research students; 8,041 are overseas students. Teaching takes place across a broad range of disciplines, which are organised into four faculties: Engineering and Physical Sciences, Humanities, Life Sciences, and Medical and Human Sciences. The faculties comprise a number of schools. The University also has numerous specialist research groups.

6.22 Given its scale, the University is particularly active in engaging in collaborative research and development which aligns with the sector strengths of Cheshire and Warrington. In particular, the Joule Centre is a focal point for the North West to make a growing contribution to national and international challenges in the field of sustainable energy R&D. The centre capitalises on the regional knowledge base in both academia and industry to develop an innovative R&D agenda that supports the work of the Northwest Energy Council to exploit opportunities in energy systems and technology development that are pertinent to the Northwest. A key ambition of the Joule Centre is to develop an internationally recognised capability in energy assessment and modelling.

6.23 Similarly, the Dalton Nuclear Institute was formed in April 2005 to coordinate and facilitate engagement of the University's nuclear capability on top-level challenges such as nuclear new build, geological disposal, waste management and decommissioning, plus links into other aspects of nuclear technology. The Dalton Nuclear Institute's vision is to become: "A world class institute for nuclear science, research, innovation, exploitation and education".

6.24 The university also has significant expertise in life sciences; the UK Centre for Tissue Regeneration is based on campus and facilitates research into tissue engineering, injury and repair. The facility allows scientists to develop and manufacture quality controlled biomaterials under aseptic conditions for pre-clinical testing, ultimately translating research innovation into clinical products for commercialisation. As the field of regenerative medicine is highly multidisciplinary, collaboration between the new centre, business initiatives and existing research groups in different faculties is an integral part of the work of the UKCTR. Researchers are drawn from specialist areas such as material science, engineering, biology, chemistry and medicine. They have targeted tissue types such as blood vessels, nerves, intervertebral disc and cartilage.

University of Keele

6.25 The university has a student population of just fewer than 10,000 and has recently invested in its North Staffordshire campus with a 70 acre development site for its new Science and Business Park. The park accommodates over 40 technologically innovative companies in its four Innovation Centres which combine innovative research culture with value added interaction and academic expertise and services biotech, medical, IT and service industries. The university's growing links with large and small businesses, especially in hi-tech areas, has created a centre of excellence which is easily accessible to businesses from Cheshire and Warrington given is close proximity to the M6.

Other Knowledge Resources

Daresbury Science and Innovation Campus

6.26 The Daresbury Science and Innovation Campus (DSIC), in neighbouring Halton, is one of only two National Science Institution Campuses in the UK. The state-of-the-art centre is designed to attract science and technology-based businesses to the region and offers a range of facilities through the co-location of the renowned Daresbury Laboratory, the Daresbury Innovation Centre and the Cockroft Institute. Its campus resources present a valuable offer to businesses of varying szies with the offer of world class technology capabilities in areas such as accelerator science, high performance computing, modelling & simulation, micro and nano-technology, sensors & sensor networks, detectors, metrology. Recently, DSIC has been expanding its facilities with the development of the Innovations Technology Access Centre (I-TAC) providing flexible lab-space and the opening of Vanguard House presenting further grow-on space.

6.27 Its offer applies to a number of sectors, with instrumentation and materials development expertise of value to advanced engineering and biomedical. Furthermore, it provides specialist provision for digital technologies, namely software development, high performance computing, mobile and cloud-based technologies. It is also beginning to develop its services to the energy and environment sector, with a cluster of businesses in the low carbon technologies sector co-locating and collaborating on research at the campus.

The Energy Innovation Centre Capenhurst

6.28 The Energy Innovation Centre Capenhurst is a business incubator dedicated to helping innovators to commercialise energy saving ideas. Services provided to individuals and SMEs by the centre include product development, funding assistance (for example the Ofgem Innovation Funding Incentive scheme), business support and access to power experts.

6.29 The centre is backed by some of the UK's biggest energy companies including: Northern Power Grid, Electricity North West, Scottish & Southern Energy, Scottish Power Energy Networks and UK Power Networks. The Energy Innovation Centres works with these industry partners to identify where the technology innovation gaps are in the UK's networks. This is is a considerable opportunity for obtaining a better understanding the needs of the energy sector in terms of R&D and supply chains.

6.30 The Energy Innovation Centre has an impressive network spanning public and private sector organisations across the UK and internationally, and is constantly evolving to provide bespoke support services for individuals and SMEs.

6.31 The Energy Innovation Centre announced in April 2012 that it will be backed by major energy industry players to become a company limited by guarantee and a legal entity in its own right. The energy companies already supporting the Centre are all backing this move. The move to this new status is significant as the Centre will be able to extend the support services available to companies which could potentially be relevant to larger companies as opposed to individual entrepreneurs and SMEs.

The University of Liverpool, Leahurst Campus

6.32 The University of Liverpool's The School of Veterinary Science has a significant campus at Leahurst. It is the base of the £1m Tesco Dairy Centre of Excellence which is developing best practice in the related fields of animal health and well-being, nutrition and productivity. The Campus is also the location for the National Centre for Zoonosis Research. This is the hub for collaborative zoonosis research across the UK and further afield. Zoonosis is any infectious disease that can be transmitted between species from animals to humans or from humans to animals.

6.33 It brings together medical and veterinary scientists, with, among others, microbiologists, ecologists, epidemiologists, statisticians, economists and social scientists. The Centre develops models for these diseases which can be used to quantify risk factors which in turn can be used in the response to and treatment of these diseases

C-Tech Innovation

6.34 C-Tech Innovation, based in Capenhurst, is an innovation management and technology development consultancy with a strong R&D base and product development capabilities in a number of areas such as advanced thermal technologies, electrochemistry, biotechnology and nanosciences. Its 70 staff are often engaged in private consultancy projects with firms from numerous sectors to develop technology applications, as well as undertaking grant funded research such as a

European Framework Programme initiative around biocatalysts and numerous Technology Strategy Board projects in which it works in consortiums to advance technological research. Alongside such activities, C-Tech is very involved in a number of Knowledge Transfer Networks (KTNs) in which promotes knowledge exchange and collaboration between businesses.

6.35 The consultancy is also involved in the Eco-Innovation Programme in which it provides free product development consultancy to beneficiary businesses which are seeking to increase resource efficiency and reduce emissions as part of the product base.

The Heath/SOG Ltd

6.36 The Heath is the former ICI Chemicals HQ offices and research centre but now offers 400,000 sq ft of labs and offices which hosts almost 150 companies and over 1,500 employees. While not providing traditional incubation services, its overall offer attracts science-intensive firms which in some cases have relocated from Manchester, for example Nanoco Technologies and Manchester Organics. Other tenants include ACAL Energy (low carbon), LGC (forensics) and Progressive Solutions (software company). The facilities ability to contribute to the regional knowledge base is largely associated with the support services around engineering, precision engineering and high pressure facilities.

Chester Zoo

6.37 Chester Zoo is biggest visitor attraction in Cheshire, the most successful Zoo in the UK, and the most financially sustainable Zoo in Europe. It has won more than 100 awards in the last ten years as both a zoo and for the wider business. In terms of its offer from a knowledge perspective, the zoo is key location for zoological research. It cooperates with the University of Chester, University of Liverpool and other North West institutions to act as a venue and facility for research projects. It also works alongside the School of Biology, Chemistry and Health Sciences at Manchester Metropolitan University to deliver post-graduate courses in conservation biology as well as funding a number of research positions including PhD students, MSc and other interns.

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Conclusions

6.38 Cheshire and Warrington represents a large and important economy. With a GVA in excess of £21bn the area has an economic output which roughly equates to half the output of the whole of Wales or three quarters of the output of Northern Ireland. In economic terms the area is more important to UK output than the City of Birmingham, Leeds, Edinburgh or Glasgow.

6.39 It may surprise many that the most important contributor to the overall economy is production. There are increasingly few UK locations where this is still the case, but Cheshire and Warrington can be regarded as a manufacturing location. Production is not the largest contributor to the economies of Greater Manchester, Lancashire or Merseyside.

6.40 Cheshire and Warrington is not polarised towards manufacturing, however, with a range of other sectors contributing to the overall strength of the economy. In fact with 1,075 registered businesses disclosing company results with a turnover of >£1m; many businesses of this scale not disclosing their results; and several businesses operating from the area but not registered in the area, it is likely that an interesting business could be found representing almost every possible sector.

6.41 Some of the summary statistics for the economy of the area are set out in the tables below:

Companies, Employees and Business Units for Cheshire and Warrington (ONS, Fame, BRES)

Units	Cheshire East	Cheshire West & Chester	Warrington	Total Cheshire & Warrington	Total MDA	Total N. Wales
Registered Companies	16,424	11,481	13,016	40,921	27,587	13,690
Registered Companies (>£1m disclosed turnover)	479	331	265	1,075	697	365
Employees	159,200	144,200	112,300	415,600	387,800	252,100
Business Units	18,037	13,549	8,033	39,619	35,686	25,127

Gross Value Added (ONS)

GVA 2009 £m	Cheshire County	Warrington & Halton	Total of Area
GVA	14,146	6,963	21,109

Breakdown of GVA by Sector (ONS, 2011)

GVA 2009 £m	Cheshire County	Warrington & Halton	Total of Area	Percentage
Agriculture, forestry and fishing	169	14	183	0.29
Production	3,169	1,159	4,328	27.03
Construction	839	593	1,432	7.71
Distribution; transport; accommodation and food	2,564	1,515	4,079	19.27
Information and communication	597	653	1,250	2.73
Financial and insurance activities	1,641	263	1,904	2.25
Real estate activities	925	641	1,566	6.18
Business service activities	1,696	880	2,576	5.90
Public administration; education; health	2,154	1,078	3,232	25.42
Other services and household activities	392	168	560	3.22

Conclusions

6.42 As a result of the analysis the following sectors are considered the most important sectors in Cheshire and Warrington and the table below breaks down the employment by area, total and also shows the location quotient (LQ) which measures how the proportion of employment in the area compares to the average proportion of employment for England and Wales as a whole (an LQ of 2 indicates that the proportion of employment is double the overall proportion for England and Wales)

Employment and location quotients for key Cheshire and Warrington sectors (BRES, 2011)

	Cheshire East	Cheshire West & Chester	Warrington	Total Cheshire & Warrington	LQ
Key Sectors					
29 : Manufacture of motor vehicles, trailers and semi-trailers	*	*	*	7,000	3.29
64 : Financial service activities, except insurance and pension funding	3,900	8,800	1,400	14,000	1.72
Chemicals, petrochemicals and minerals	1,500	4200	1,000	6,300	2.38
21 : Manufacture of basic pharmaceutical products and pharmaceutical preparations	*	*	*	2,000	2.98
72 : Scientific research and development	*	*	*	4,200	2.14
71 : Architectural and engineering activities; technical testing and analysis	3,000	2,200	4,700	9,900	1.65
Other Important Sectors					
35 : Electricity, gas, steam and air conditioning supply	1,300	100	600	2,000	1.23
10 : Manufacture of food products	2,300	2,112	1,076	5,500	1.05
17 : Manufacture of paper and paper products	700	200	-	1,000	1.27

6.43 The average concentration of employment and absolute numbers of people employed provides a good indication of the importance of the sector to an area but this can be contrasted with the largest companies in Cheshire and Warrington to demonstrate that there will be important companies in every sector irrespective of general strengths. The following table sets out the largest registered companies in Cheshire and Warrington by turnover

Largest registered companies in Cheshire and Warrington by Turnover (Fame, 2012)

Company	Turnover £000s	Employees	Description
Done Brothers (Cash Betting) Limited	4,110,480	2,996	Betting operations.
GB Oils Limited	3,150,587	1,957	The sale of oil products.
AMEC P L C	2,950,600	18,610	Consulting engineering
European Metal Recycling Limited	2,431,157	2,226	Metals and haulage, wharf operating, stevedoring, ship-broking and chartering.
Mbna Europe Bank Limited	1,854,000	4,891	Other financial service activities, except insurance and pension funding, (not including security dealing on own account and factoring) n.e.c.
Bentley Motors Ltd	1,590,900	3,364	Manufacture of motor vehicles
United Utilities Group PLC	1,513,300	4,735	Holding company of a group which owns and operates water and wastewater assets in the North West of England.
Chicago Beta Limited	1,485,498	1,391	Activities of head offices. Ownership of part of the former Caudwell Communications Group now in private equity ownership.
Talktalk Communications Limited	1,342,048	1,487	The provision of telecommunications services.
Marlowe Holdings Limited	1,235,318	4,639	Activities of head offices. Electrical wholesaler and trade sales organisation.
UK Fuels Limited	620,918	180	Wholesale of fuels and related products (other than petroleum and petroleum products)

Conclusions

6.38 A review of the current position of the sectors examined is set out below.

Advanced Engineering

6.39 The advanced engineering sector is well represented in Cheshire. The automotive sector is the sector within Cheshire that has the highest concentration of employment relative to England and Wales of all the large employing sectors. The results are mainly as a result of the Bentley Motors headquarters and manufacturing plant and the Vauxhall Motors assembly plant but there are some other (limited) component manufacturers in the area and other bodywork specialists.

6.40 In addition to the operations based in Cheshire, significant operators move components across the area - Toyota move engines from Deeside to Derbyshire; JCB move axles and gearboxes from Wrexham to Staffordshire; and JLR are soon to move engines from Staffordshire to Halewood. Whilst these investments have been underway, Cheshire has lost commercial vehicle investments from Foden and ERF. Automotive investment in Cheshire appears to have been a missed opportunity although, Cheshire remains well positioned for the major automotive plants in the UK and whilst there are fewer automotive component manufacturing investments made in Western Europe than in the past, automotive is a sector of strength for the area and is likely to offer some future opportunities. Component suppliers to JLR and Bentley (in particular) may present opportunities in the future.

6.41 Often categorised as part of the advanced manufacturing sector is aerospace. Cheshire is between the two most important aerospace manufacturing locations in the UK – Airbus in Flintshire and BAE Systems in Lancashire. Whilst the two areas produce products for different markets, there is some cross over in requirements in terms of engineering parts and working practices. Cheshire itself was a base for aircraft production until the announced closure of BAE Systems Woodford in Cheshire East.

6.42 There is a surprising lack of visible activity in the aerospace sector and whilst there are some companies identified in this report supplying the sector and there are no doubt other companies with linkages, the spill over benefits appear to have been small. It is possible that future programmes within Airbus could result in further opportunities and there may be MRO initiatives at Manchester Airport that could benefit the Cheshire and Warrington economy. The aerospace sector however, appears to be an area where Cheshire and Warrington has lost its expertise.

6.43 If automotive and aerospace represent sectors of missed opportunity, consulting engineering is an undoubted area of strength. It is our belief that strengths in consulting engineering across Cheshire and Warrington have been overlooked by traditional sector analyses because this sector serves multiple industries. The location of Warrington, the legacy of the nuclear industry, the concentration of the chemical industry and the presence of organisations such as United Utilities and Electricity North West have all created a large body of engineering strength.

6.44 The report identifies large numbers of consulting engineering companies, engineering contractors and risk management businesses either directly linked to specific sectors or operating across sectors. The investment required in the UK in electricity generating capacity both from conventional, nuclear and renewable sources will drive growth in this sector. Nuclear decommissioning is another area where growth will be delivered and further investment in UK transport and smart grid infrastructure is another area of opportunity.

6.45 If there is a single hidden gem within the Cheshire and Warrington economy it is the concentration of engineering expertise at a time when these skills are at a premium for the UK economy. This is a sector in which a greater level of promotion is required and investment sought.

6.46 Linked to all of the sub-sectors involved in advanced engineering is the tail of engineering contractors and engineering manufacturing businesses whilst this represents an area in which UK SMEs have been squeezed in recent years

Cheshire and Warrington does still represent a location where a number of these businesses are represented. They are able to supply the important sectors of chemicals, food, wider manufacturing and energy generation.

6.47 If there is one strength that has not been widely attributed to Cheshire and Warrington in the past, it is that the area is a nationally important centre for engineering advisory activity.

Financial and Business Services

6.48 The financial services sector within Cheshire and Warrington in mainly focused on the city of Chester. The presence of the former Capital Bank operations (now owned by Lloyds Banking Group), the operation of Marks and Spencer Financial Services (now operated by HSBC), and the location of MBNA in Chester has resulted in a significant concentration of banking activity. The presence of these companies and the skills developed in the workforce are likely to have been a contributory factor in the development of further smaller financial services companies in the authority area of Cheshire West and Chester.

6.49 The city of Chester itself is an important service centre for West Cheshire and North Wales and as a result has a number of general banking, legal, insurance and accounting operations. Consolidation in this sector places some of these operations at risk.

6.50 Consolidation in the sector and specific issues concerning Lloyds Banking Group and the MBNA credit card operations have led to some concerns that Chester is over reliant on financial services. Whilst diversification of the service sector would be beneficial (and could be facilitated through the provision of greater levels of modern office space in the new central business district) it is likely that financial services will continue to generate growth in the UK economy albeit at a lesser rate than during the last decade. Chester can offer opportunities to new entrants into the banking sector.

6.51 Financial Services outside of Chester are limited, although there is a small concentration in Wilmslow, but the Barclays IT Service Centre in Knutsford is of regional significance.

6.52 There are a number of business services activities in Cheshire and Warrington. This is the sector in which significant growth has been generated over the last decade and leads the sectors in which foreign direct investment into the UK economy has been secured. Whilst a number of businesses are identified in this report, in general Cheshire and Warrington has under-performed in the attraction of this type of business to the area. This is a continued area of opportunity and the population catchment areas, national and international linkages, population skills and relative under exploitation of the area by other operators could represent an important opportunity to Cheshire and Warrington.

Life Sciences, Food and Chemicals

6.53 There is no doubt that Cheshire and Warrington represents an important location for pharmaceutical investment. In fact this sector is not widely represented across the whole patch but is particularly concentrated in Macclesfield, Cheshire East. A large proportion of the employment in the sector is due to the significant presence of AstraZeneca and recent difficulties at the company have illustrated the fragility of the cluster in the area. Beyond AstraZeneca the footprint of pharmaceutical/life sciences businesses in the area is limited. It is likely that there is an opportunity to widen the sector base by capturing spin out opportunities from the company. This has been achieved successfully at other pharmaceutical locations such as Uppsala, Sweden. Cheshire and Warrington faces a challenge to secure this type of investment whilst Manchester, Liverpool and Keele universities are all providing significant support to businesses in the sector.

6.54 The food industry is often perceived as being extremely important to the Cheshire and Warrington economy. Indeed the dairy industry is synonymous with Cheshire and its agricultural base. In fact, whilst food manufacturing remains an extremely important employer within the area, the concentration of employment in the sector does not significantly exceed national levels. Cheshire and Warrington is a location where independent food businesses are important but there are few major international players represented in the area and there is no niche of the sector in which Cheshire and Warrington appears to have a clear differentiation. Food does however employ 5,500 people across the area and the sector does continue to throw up new investment opportunities and so the food sector should not be over-looked.

6.55 Whilst Cheshire and Warrington has strengths in both life sciences and food, the key industry in this umbrella sector is chemicals. Chemicals appears to have become the Cinderella sector in economic development in recent years with cost, regulatory and planning issues resulting in difficulties for the UK in attracting new investment. Nevertheless, existing investors and the contribution that they continue to make to the Cheshire and Warrington economy is highly significant. The chemicals, petrochemicals and minerals industries account for the employment of 6,300 people and the industry employs a proportion of the workforce which is more than 2.3x greater than the average for England and Wales. The sector extends beyond Cheshire and Warrington along the Mersey estuary and into the Deeside area.

6.56 Throughout the 2000s there have been examples of chemical plants being acquired by private equity groups or specialist large scale (often US) chemical groups with the intention of reducing costs and gaining a return on legacy investment. A recent development in Cheshire and Warrington however has been the arrival of Indian investment into the sector. With the former Brunner Mond (Tata), Stanlow Refinery (Essar) and United Phosphorus now under Indian corporate ownership and with the promise of new investment there may be further opportunities for the sector. This could be an important inward investment trend and could be extremely significant for Cheshire and Warrington.

6.57 Attracted to the area by the life sciences, food and chemicals sector and perhaps underpinned by output from these sectors is paper and packaging. This low profile sector is extremely important in Cheshire and Warrington. With two paper companies operating from Cheshire East and numerous packaging companies across the entire area, this is an area of expertise for Cheshire and Warrington.

6.58 In policy terms, the continued strengths of engineering, pharmaceutical, food, chemical and packaging manufacturing demonstrates the importance of delivering available B2 classified manufacturing employment land to accommodate change, reinvestment and growth. This is an issue for authorities across the UK but is particularly important in an area such as Cheshire where manufacturing still represents the largest output of any sector for the economy.

Energy and Environment

6.59 The energy and environment sector in Cheshire and Warrington is important and is inter-linked with the section on consulting engineering.

6.60 Cheshire and Warrington may play a role in the generation of future low carbon energy through technologies such as biomass power plants or anaerobic digestion but the major new builds whether wind, wave, tidal, nuclear or more conventional fossil powered plants with carbon reduction technologies are likely to take place outside the area.

6.61 It is likely that Cheshire and Warrington companies will play a role, however, in many of the new areas of development through design, consulting and contracting. Cheshire and Warrington not only has the skills and companies to play a major role in the various initiatives but the central location will once again be important. This can be an area of large scale growth over the next few years.

Conclusions

ICT

6.62 Whilst Cheshire and Warrington has a strong position to set out against all of the other UKTI sectors, the ICT sector is not an area of particular strength. As ever, the area has some notable companies representing the sector and the overall employment generated by the sector amounts to more than 11,500 people, in each sub-sector Cheshire and Warrington employs a lower concentration of people that the average for England and Wales. It is likely that the sector is typified by small scale consultancy, IT contractors and micro businesses and this no doubt represents an area of tremendous skills but it is perhaps surprising that no larger businesses have emerged.

6.63 Software and digital media represents an area of huge growth for the UK economy and this is an area in which Cheshire and Warrington could attract further investment given the international links, potential customer base (including Media City) and the living environment. At the moment it is an area of surprising paucity.

Knowledge Resources

6.64 As the UK shifts to a more knowledge-driven economy, it is important to appreciate the assets and capabilities which support the dissemination and adoption of new knowledge, expertise and innovation within the leading sectors in Cheshire and Warrington in order for it to remain competitive and responsive. These assets can be presented in two categories: universities and knowledge intermediaries.

6.65 In regards to the offer from the higher education base, Cheshire and Warrington is well positioned to capitalise on universities based directly in the area, alongside neighbouring institutions that are easily accessible. In terms of the dynamics of the research base, the University of Chester has a number of business engagement programmes that predominantly focus on applied rather than basic research. This equates to the testing, refining and deployment of products and technologies i.e. the environmental diagnostics services and the facilities at the Food Innovation Centre. This provision goes some way to reflecting the strengths of the industry base in the area but there could be more scope to broaden this offer, especially in regard to the concentration of business activity in chemicals, engineering, materials and manufacturing which may have discrete needs for applied research capabilities. From a teaching perspective, the university again offers a variety of courses and training that likely reflect wider trends in take-up rates nationally, with strong offers around finance and business, creative and digital and health and social care. While there is some alignment with the employment opportunities in the area, especially around financial and business services, again there may be an opportunity for the university to focus on offering more provision with an emphasis on numerate skills, science and technology, which is more likely to meet the needs of the large proportion of science-intensive businesses across the three authorities

6.66 Beyond the university base, there are number of very valuable knowledge intermediaries in the area and neighbouring the authorities which have a very important role in providing the conditions for firms to develop products, processes and systems which will stimulate economic advantage. Specifically, the Daresbury Campus offers a number of facilities which are geared at SMEs and start-ups across numerous sectors that help reduce both the costs and risks of developing new technologies. It also acts as a focal point for networking and knowledge exchange within high-tech sectors of biomedical, ICT and environmental technologies. Complementary to Daresbury, C-Tech Innovation represents an intermediary with a substantial expertise in innovation management that enables the business base to access guidance and advice in developing and commercialising new applications.

Sources

The sources for the data contained in this report are as follows:

- All employment data and location quotients by SIC code is from the ONS Business Register and Employment Survey. The data used 2010 data which is the most recent dataset at the time of writing the report.
- All GVA data is taken from ONS Regional Accounts
- All business unit data (limited uses) is taken from the ONS Annual Business Inquiry 2008 and is not somewhat dated
- All registered company data has been sourced from FAME
- Registered company data has been supplemented by Local Authority insights (noted in the text)
- Commentary about the activities of companies has been derived from desk research on the companies involved.