



# Black Country Skills Factory Response to WMCA Productivity & Skills Commission

May 2017

Black Country *Skills Factory*



## WMCA Productivity and Skills Commission Call for Evidence

### Respondent Information Sheet

Please note this form must be returned to [productivityandskills@wmca.org.uk](mailto:productivityandskills@wmca.org.uk) or Productivity and Skills Commission, Communications Department, 16 Summer Lane, Birmingham B19 3SD with your response by 31st May 2017. For clarity, there is no requirement that your response to the Call for Evidence answers every question posed.

Please take the opportunity to provide any additional information that would be of benefit to the Commission but isn't covered directly by the questions outlined in this document.

Are you responding as an individual or an organisation?	<b>Organisation</b>
Full name or organisations name	<b>Black Country Skills Factory</b>
Phone number:	<b>08458 15 15 15</b>
Address:	<b>The Deckhouse Waterfront West Dudley Road Brierley Hill</b>
Postcode:	<b>DY5 1LW</b>
Email:	<b>colin_parker@blackcountryconsortium.co.uk</b>
The West Midlands Combined Authority (WMCA) may wish to publish your response in full or in part. The WMCA commit not to distort or misrepresent your response in any full or part participation.	
Please indicate your publishing preference: <b>1. Publish response with name</b> 2. Publish response only (anonymous) 3. Do not publish response	

Should you wish for your response not to be published, it will only be shared within the WMCA and used for the purposes of informing future planning.

Should the WMCA wish to contact you in the future, would you willing to be contacted? <b>Yes</b>
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## Black Country Skills Factory Response

### Skills

1) How are current actions in the West Midlands supporting the improvement of meaningful skills development across the area? Please give examples of what you think is working well and what could be improved particular in light of recent and forthcoming changes in the skills system. [Please provide evidence to support your views]

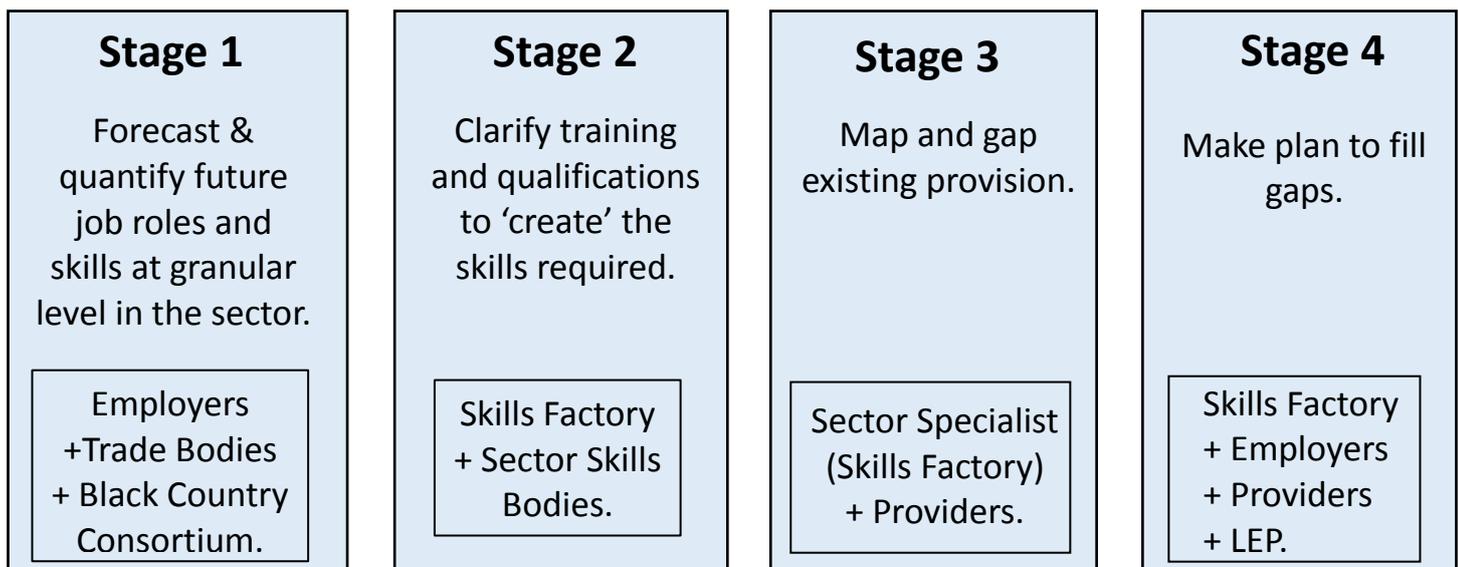
Skills are both a strength and a challenge in the Black Country and wider West Midlands Combined Authority region. Many businesses cite the skilled workforce as a key factor in their success, particularly in high value manufacturing, but considerable skills gaps exist in the area and this is acting as a significant barrier to growth.

Substantial steps have been taken to address these skills challenges and to improve skills development in the area. In the Black Country specifically, the Black Country Skills Factory is a key example of where direct public sector action has proved successful in accelerating meaningful skills development locally.

### Black Country Skills Factory

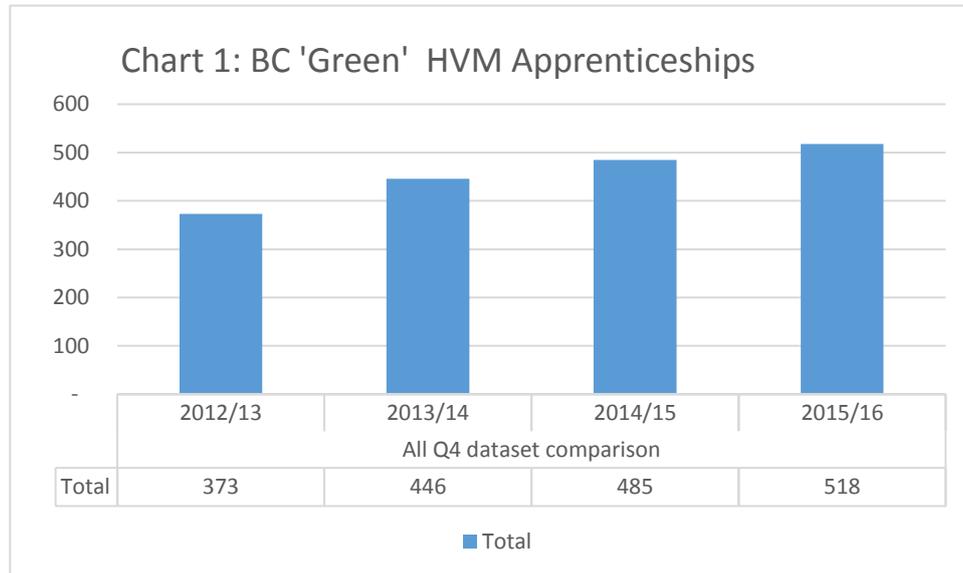
Praised in the government's recent Industrial Strategy green paper, the Black Country Skills Factory is a highly successful Black Country LEP initiative aimed at addressing skills shortages in the high value manufacturing (HVM) sector in the Black Country. The Skills Factory has significantly improved the ability of manufacturing firms to access the training provision they require, and the initiative's success is underpinned by the quality of the innovative model at its core.

The Skills Factory 'model' is based on the following steps:



Three main features of the Skills Factory model:

- i) **Employer Engagement** – through understanding of employer needs, the Skills Factory creates relevant bite-sized, practical training in line with labour market demand; actively operating this employer-led approach is a crucial feature within the model. Identifying employer need is carried out through sector specialists who understand the granularity of training required, which is then delivered by ‘best in class’ independent providers. Crucial to the Skills Factory’s role here is that it’s an industry credible leader, independent of the training provider base.
  
- ii) **Promotion of Apprenticeships** – the Skills Factory supports employers looking to take on apprentices by offering impartial advice and support, and can signpost them to local colleges or training providers based on their needs. Within the Black Country City Deal a main priority, with targets, was the delivery of HVM apprentices, and the Skills Factory is leading locally on continuing this focus. Given that the number of apprenticeship starts in the Black Country is increasing at a faster rate than the national average, and, even more notably, the Black Country was the only LEP area in the WMCA which didn’t see apprenticeships fall from 14/15 to 15/16, apprenticeship growth is a current success story in our locality - driven by the quality of the Skills Factory’s activity. Chart 1 below demonstrates this and strengthens the case for the Skills Factory as an effective model. ‘Green’ apprenticeships reflect the apprenticeship course subjects which were outlined as important to employers through the Skills Factory’s engagement (not all apprenticeships are deemed valuable). To see a steady rise over the last few years for these apprenticeships proves that the Skills Factory is working – it increases the skills base in areas specifically required by employers.



- iii) **Mapping and Gapping of Existing Provision** – by identifying where local assets cannot supply the equipment and training demanded by employers (shown in the images below), the Skills Factory is able to plug gaps within existing provision. Black Country LEP uses Local Growth Fund (LGF) Skills Capital funding to plug these training and equipment gaps. With the addition of the new Elite Centre for Manufacturing Skills (LGF funded training centre to open in Wolverhampton), all the required training equipment (as identified by employers) will be available somewhere in the Black Country. The £8.2m ECMS, opening in August 2017,

will function as an employer-led training facility for the Black Country, designed to improve productivity and growth in the high value manufacturing (HVM) sector. It's important to point out the integral part the Skills Factory has made with regard to the ECMS; the Skills Factory's mapping and gapping activity gave rise to the need for this new centre in the local area, reflecting employer demand.

**Before (2014)**

**2014 - Training Equipment in colleges and training providers**

	General Engineering		CNC Milling				CNC Turning		Toolroom		Sheet metal		Foundry & Metals		Weld		Maintenance				CAD		Measurement & quality	
	Vertical Milling	Lathes / turning	Type	Control type	Type	Control	Type	Control	Toolroom	Sheet metal	Foundry & Metals	Weld	Maintenance	Control type	Software	CAD	Measurement & quality							
Dudley College																								
Wolverhampton																								
Sandwell																								
Walsall																								
Birmingham																								
In-Comm																								
STA																								
EEF (WV)																								
PTP Walsall																								
Halesowen College																								

**Equipment required**

**Colleges & Training providers**

**Many 'gaps' in provision – no equipment for training in these 'gaps'**

**After (2016)**

**Training Equipment in colleges and training providers**

	General Engineering		CNC Milling				CNC Turning		Toolroom		Sheet metal		Foundry & Metals		Weld		Maintenance				CAD		Measurement & quality
	Vertical Milling	Lathes / turning	Type	Control type	Type	Control	Type	Control	Toolroom	Sheet metal	Foundry & Metals	Weld	Maintenance	Control type	Software	CAD	Measurement & quality						
In-Comm																							
STA																							
EEF (Witton)																							
PTP Walsall																							
Halesowen College																							
Elite Centre For Mfg Skill																							

**Equipment required**

Fab Kit. CNC at all provider. Main control systems available somewhere

Elite Centre focus on 'missing' equipment and provision

**With addition of Elite all required equipment is available somewhere in Black Country**

The Skills Factory is certainly a successful current action which is supporting the improvement of meaningful skills development in the Black Country. The key success factors of this model are:

- Employer-led
- Sector specialist to understand the granularity of training required
- Independence (& impartiality) of training providers

The Skills Factory has received funding from three separate places to date: SFA ESF, UKCES Skills Factory (part of the Growth Innovation Fund), and UKCES Management & Leadership; it's proved to have a model that works for its overarching priority of upskilling the workforce and is an integral part of local skills development. This is most obviously seen in the brokering of bespoke training provision to enable employers to increase the skills of their workforce.

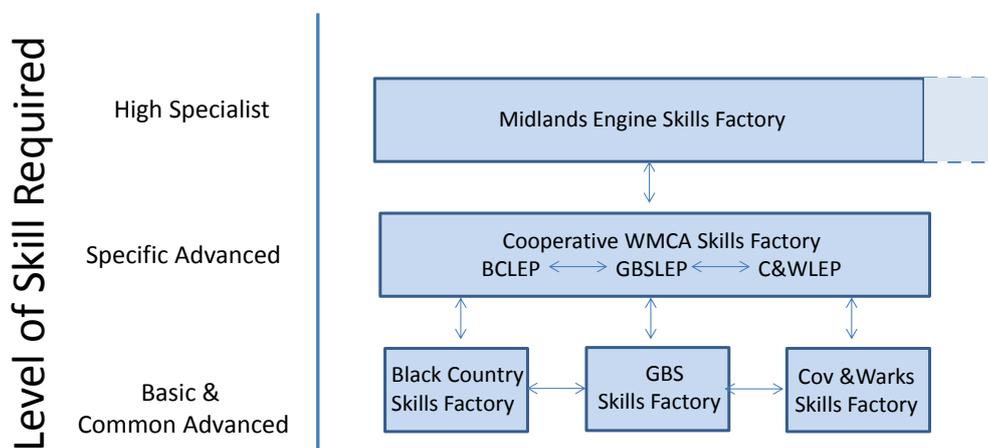
Furthermore, the Skills Factory actively works with schools to help increase the pipeline of suitably qualified young people wanting to join the manufacturing sector. This is done through the Careers & Enterprise Adviser Programme, details of which are outlined in our response to question 4.

The excellent work of the Skills Factory demonstrates the ability of the public sector to successfully identify gaps in skills development provision, and respond successfully to them through relevant actions. This is an example of where public sector intervention is working well, particularly the scale of the difference the Skills Factory is making and its growing influence on workforce upskilling locally. There are also a number of areas which could improve skills development locally and importantly at the West Midlands level. Our suggestions for this are:

- The Skills Factory would make a greater impact on a regional basis (at the WMCA level for example), allowing the benefits of economies of scale to be better realised. Birmingham and Coventry & Warwickshire have different specialisms to the Black Country (e.g composites in CWLEP), and a Skills Factory model in could broker bespoke training provision in these geographies, as it has done successfully in the Black Country. Even further afield, there's no reason why the Skills Factory couldn't work at the Midlands Engine level in order to integrate skills development across a larger geography. Below is an image which sets up the scale up and scope of the Skills Factory concept for wider regions.

The key success factors of the model give it the ability to easily branch out into areas outside the Black Country with differing specialisms – it has great potential to affect meaningful skills development on a grand scale.

### Scale Up and Scope of Skills Factory Concept in each Sector



- Skills in the sectors of the future (e.g. in emerging technologies) needs to become a priority. This is particularly pertinent given the perceived low digital index within West Midlands firms (according to Lloyds' Digital Index). In order for us to maximise the opportunities presented by Industry 4.0, we need the people with the right skills and capabilities.

On a separate issue, the recent apprenticeship changes are still too new to judge accurately, but are right in principle.

*2) What are the key barriers to skills development and how could they be removed? [Please provide evidence to support your views]*

We have identified two key barriers to skills development locally: one is regarding the current Further Education (FE) delivery model; and another focuses on the continued need for more apprenticeships. Changes within these two areas would ensure there are more capable entrants into key sectors - particularly regarding technical skills.

The current FE delivery model places too much focus on training full-time students and 'volume' training; this setup ensures a detachment between training mechanisms and the needs of industry. More favourable for local skills development would be for FE training providers to become much more employer focussed, with the delivery of bite-sized courses a priority – suiting the needs of employers. As alluded to previously, this kind of model has been seen as successful and advantageous through the Black Country Skills Factory.

Secondly, despite recent improvements there still remains a need for more apprenticeships in the region. A historical barrier to more apprenticeships has been poor perception of their value compared with degree routes; continuing to raise the brand of apprenticeships should continue to be a priority. Apprenticeships need to be linked closely to careers and local labour market needs, ensuring skills gaps are marginalised, and careers advice must be more in tune with this. Raising the quantity of apprenticeships in technical subjects is particularly important in an area like the West Midlands which relies heavily on a technically skilled workforce but continues to have skills gaps in related sectors. Better supplying the demand of technically skilled labour with apprenticeships would be an effective way of developing a capable workforce in both the short and long-term.

The Skills Factory's approach ensures that apprenticeships demanded by local employers are available at the right scale and quality from providers. Through the mapping of desirable apprenticeship courses to employers, the Skills Factory is able to prioritise which courses are made available by the provider base. The new Elite Centre for Manufacturing Skills is a good example of where we have used Local Growth Funding to provide equipment and training facilities for apprenticeships which are desired by employers in the local area. Prioritising these courses, known as our 'green' apprenticeships, ensures that the characteristics of the current and future labour supply match the demand of employers.

Businesses in our region currently don't have the labour pool available to them to maximise their potential. For example, the UKCES Employer Skills Survey (2015) indicates that around 20% of establishments across the Black Country have reported either a skills shortage vacancy or a skills gap: this is higher than the national average. Through a shift in the FE delivery model and an even greater focus on driving through apprenticeships, the West Midlands area would have more capable entrants to the labour market. This would help businesses in our key sectors reach their potential when it comes to productivity and overall competitiveness.

*3) What do you see as the likely impact of Brexit on skills in the West Midlands? How could opportunities be maximised and threats be mitigated? [Please provide evidence to support your views]*

Put simply and briefly, Brexit will most likely increase the need for upskilling in the West Midlands. A likely outcome from Brexit will be the reduction of labour supply from Europe, leading to the need for local workers to fill gaps in the job market, many of which will require upskilling. Furthermore, in a less certain and less seamless trading future, West Midlands businesses will need to be as competitive as possible in order to win orders and continue to grow; for many, a necessary condition of business success is the provision of a skilled workforce. Brexit will therefore accelerate the need for us to upskill.

*4) How effective is careers advice in the West Midlands and how could it be improved? [Please provide evidence to support your views]*

It's clear that the priority given to careers advice varies greatly across West Midlands schools. Some schools have a dedicated 'Director of Careers', of which careers advice is their primary responsibility, whereas other schools only operate careers advice in a rota system among teachers. Raising careers education in a more balanced way is a policy area which needs intervention from national government, but local delivery is essential and has already proved to be successful in the Black Country.

Locally, it's vital to get employers/businesses engaged in schools, as the latter tend to not know enough about the world of work and industry. Employer-led initiatives in this space can act as a 'win-win' for all stakeholders: schools are able to maximise their careers education offer; key sectors can raise awareness and benefits of their industry; and pupils are exposed to a wider range of options for their future. The societal impact of this activity locally is that hopefully more skilled labour will eventually be available in key sectors, to reflect the needs of the local labour market and industry.

The provision of careers advice is a fragmented market, with over 80 organisations offering some sort of service to schools in this space in the Black Country. Detailed below, the Careers and Enterprise Adviser Programme aims to be an umbrella initiative for the multiplicity of careers advice services available to schools; it helps schools in using the advice available.

**Careers and Enterprise Adviser Programme** – this programme links the world of work with schools through employer volunteers supporting schools and academies in developing and maximising the quality of their careers education. As the market for careers advice is both fragmented and confusing for schools (with over 80 organisations offering a service in this market to Black Country schools, as identified by the Skills Factory), the CEC adviser programme acts as an umbrella organisation to help school leadership prioritise what they should be doing and how to better engage local employers in doing things that the school needs. The CEC Adviser programme in the Black Country has now sourced and matched a senior level business person in 32 of 80 senior schools, demonstrating the ability of the programme to better connect schools and industry.

Feeding into the CEC Adviser Programme is the **use of Local Labour Market Data** – through this data (at the town level – e.g. Willenhall, see visual at end of Skills response), the local situation can be accurately mapped out. This has proved to be helpful for schools to help them engage local businesses, and develop knowledge of these businesses. Subsequently,

focus can be placed on the sectors/proficiencies with particular skills gaps in different areas – to the benefit of local employers. The presence of key sectors in local areas is also mapped, shown by the image at the end of this skills response of advanced manufacturing in Walsall. This method of using very local data has been shared at the national LEP skills network, demonstrating it as an example of best practice; using this activity creates an easy connection between schools and local businesses.

A particularly effective careers advice programme locally has been **Passport to Employment** – the CEC Investment fund has invested in this project to support young people across the Black Country to develop their careers in key transformational sectors (advanced manufacturing, building technologies, transport technologies, environmental technologies and business services). Passport to Employment connects year 9 pupils and teachers with employers from the key sectors, enhancing careers and employability learning within schools. So far the programme has been hugely successful, and has gained national recognition as the West Midlands’ best practice project at The Careers & Enterprise Company’s national conference. Underpinning the success of this programme has been the strong partnership arrangement which serves it: Business in the Community, National Careers Service, the four Education Business Partnerships and Black Country Consortium have come together to create a Black Country focused programme, displaying best practice for our key sectors.

Passport to Employment is a best practice example of how the CEC Adviser programme (with the use of local labour market information), can assist schools in accessing excellent careers advice, for the wider benefit of employers and the local economy.

Through these means in the Black Country we’ve shown how employer engagement can occur, and its benefits to the improvement of careers advice. Engaging employers is key to raising the standards of independent careers advice in schools, and improvements across the wider West Midlands area should be carried out in this way. Ideally, further national government policy will be developed in this space, but as has been shown in the Black Country, many strides can be made locally.

*5) What could be done to further develop effective leadership and management practices in the West Midlands? [Please provide evidence to support your views]*

Further priority should be placed on degree-level apprenticeships in leadership and management for people currently in work. The spreading of this activity, and making it worthwhile for employers, would help us create better leadership and management within our business base.

Another important area of work is extending the successes made by the UKCES Futures programme. The Black Country Consortium designed and co-ordinated the delivery of a programme of Leadership and Management courses aimed at employees within the manufacturing sector in the Black Country, as part of the Futures Programme (‘Management and Leadership in the Supply Chain’ strand).

Twelve ‘bite size’, one day sessions were designed and delivered. These were hosted within ‘best practice’ companies for each of the key topic areas covered, thus demonstrating to delegates how the skills they learnt could, and should, be applied in the workplace. The evaluation of the Black Country’s UKCES Futures programme shows that “satisfaction with the courses themselves and the various elements of the course such as their format and location was relatively high amongst both delegates and managers who have sent staff to attend this training.” The nature of the training as

'bite-size' was found to be very popular in attracting participation, again alluding to the strength of this focus from the Skills Factory. Furthermore, hosting the training at 'best practice' companies proved to be an effective way of enticing businesses; using companies as an example for others to follow is an effective way of attracting interest across businesses. Future activity on leadership and management in the West Midlands should certainly learn from the Black Country's experience and success with the UKCES Futures Programme.

Driving up demand from employers is an essential part of ensuring maximum impact from the above activities. This can be done through the promotion of benefits of return on investment, particularly to learners and employers. Whilst, like other training, leadership and management training will need to be resourced, employers will pay for the right training. Another way of enticing businesses to improve their leadership and management is to host training at 'better practice' companies (as already mentioned in regard to the UKCES Futures programme).

*6) How are businesses putting the concept of 'Good Work' into practice? What can other businesses learn from this? [Please provide evidence to support your views]*

According to the Commission on Good Work, successful, frontier businesses in the UK are responding to uncertain times economically and in labour markets through a greater focus on:

- Unlocking the business value from external networks as well as internal capability.
- Collaboration across value chains through crowd-working, and outsourced "virtual" project teams, involving core employees, international workers and outsourced external freelancers.
- Working across disciplines, as boundaries blur, supporting cross fertilisation and hybrid functions.
- Leaner, flatter management structures and more agile distributive leadership.
- Smarter, technologically-driven operations.
- Dealing with complexity, uncertainty and shorter innovation cycles.
- Securing performance improvements through teams that are more virtual, multi-generational and culturally diverse.

Local Labour Market Data Example – Willenhall (Page 1 of 2)



### DEMOGRAPHICS

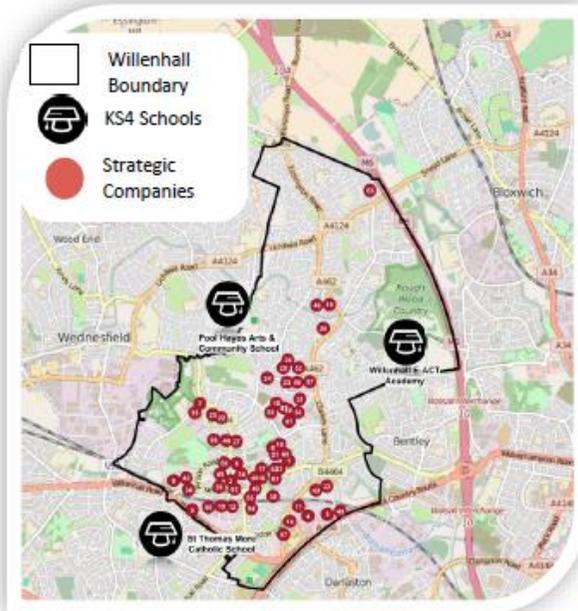
Working age population: 25,558  
 Aged Under 16: 7,927 residents  
 Aged 65+: 6963 residents

**Gender**  
 Male: 12,697 (49.6%) residents  
 Female: 12,861 (50.4%) residents

**Ethnicity**  
 White: 83.6%  
 Mixed/Multiple Ethnic Groups: 2.5%  
 Asian/Asian British: 10.6%  
 Black/Black British: 2.1%  
 Other: 1.2%

**Indices of Deprivation**  
 Top 40% of most deprived areas

## WILLENHALL PROFILE (Walsall)




### EDUCATION

**Pool Hayes Arts and Community School**  
 Progress 8 score: -0.03  
 Attainment 8 score: 51.9  
 Maintained School  
 Ofsted Rating – Not published

**Willenhall E-ACT Academy**  
 Progress 8 score: -0.66  
 Attainment 8 score: 41.3  
 Academy Sponsor Led Mainstream  
 Ofsted Rating 3 (Requires Improvement)

**St Thomas More Catholic School**  
 Progress 8 score: -0.27  
 Attainment 8 score: 50.5  
 Maintained School  
 Ofsted Rating 2 (Good)

**National Averages**  
 Progress 8: 0.00  
 Attainment 8: 48.5

### EMPLOYMENT

Jobs: 17,765 (68.7%) of residents in employment

**Full-time employment** ↑ 1%  
 12,931 (72.8%)  
 UK Average: 71.8%

**Part-time employment** ↓ -1%  
 4,834 (27.2%)  
 UK Average: 28.2%

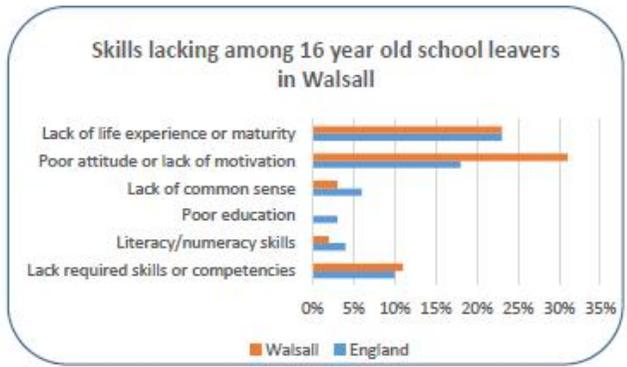
**Unemployed** ↓ -3%  
 2,117 (10.6%)  
 UK Average: 7.6%

Claimants : 745 (2.6%)



### WALSALL SCHOOL LEAVER DESTINATIONS

- Sustained education destinations (86%)
- Sustained employment destination (1%)
- FE Colleges (30%)
- Apprenticeships (5%)
- State-funded sixth form (50%)



## Local Labour Market Data Example – Willenhall (Page 2 of 2)

### BUSINESS

#### 63 Strategic Companies:

ID	Company_name	Major_sector
1	1ST Access UK Ltd.	Metals & metal products
2	8p.M. Chemist Limited	Wholesale & retail trade
3	99P Stores Limited	Wholesale & retail trade
4	A J S Metals Limited	Metals & metal products
5	A.F.Blakemore And Son Limited	Wholesale & retail trade
6	Abbey Spuncast Limited	Metals & metal products
7	Aspray Transport Limited	Transport
8	Assa Abloy Limited	Metals & metal products
9	B.E. Wedge Holdings Limited	Metals & metal products
10	Bollhoff Fastenings Limited	Wholesale & retail trade
11	Brookside Metal Company Limited	Metals & metal products
12	C S Labels Limited	Publishing, printing
13	C&F Group Holdings Limited	Metals & metal products
14	C. Fullard (Metals) Limited	Wholesale & retail trade
15	Cable & Alloys (Willenhall) Limited	Wholesale & retail trade
16	Central Pattermaking Limited	Machinery, equipment, furniture, recycling
17	Croft Architectural Hardware Limited	Metals & metal products
18	Direct Security Systems (Midlands) Limited	Construction
19	ERA Home Security Limited	Metals & metal products
20	Euro Beer Distribution Ltd	Wholesale & retail trade
21	F T L Foundry Equipment Limited	Metals & metal products
22	Fortel Services Limited	Construction
23	Gilmore Building Supplies Limited	Wholesale & retail trade
24	GLJ Contracts Limited	Construction
25	Guardian Lock And Engineering Company Limited	Metals & metal products
26	I.B. Construction Limited	Construction

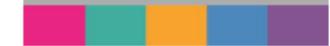
#### Data Sources

Demographics: ONS Ward-level Mid-Year Population Estimates  
 GOV.UK: IMD: English Indices of Multiple Deprivation 2015  
 GOV.UK: School Leaver Destinations  
 GOV.UK: Destinations of Key Stage 4 and Key Stage 5 Pupils 2015  
 Education: Schools, Pupils and their Characteristics  
 Resident Qualifications: Census 2011

#### Indices of deprivation:

Top 0-20% most deprived:   
 21 – 35%   
 36 – 50 %   
 51 -65%   
 66 – 89%   
 Least deprived 10% 

Black Country Skills Factory



27	Jackdaw Tools Limited	Wholesale & retail trade
28	Jeenashire Limited	Other services
29	Lydonford Limited	Wholesale & retail trade
30	Midland Chilled Foods Limited	Wholesale & retail trade
31	Midland Pie Products Limited	Food, beverages, tobacco
32	Millstock Stainless Limited	Wholesale & retail trade
33	Monarch Equestrian Limited	Machinery, equipment, furniture, recycling
34	Mukesh Aggarwal Limited	Wholesale & retail trade
35	Nationworld Limited	Transport
36	On-Time Specials Limited	Wholesale & retail trade
37	Opaque Decorators Limited	Construction
38	P.B.R.Abrasives(Wolverhampton)Limited	Wholesale & retail trade
39	Phase 9 Roofing Limited	Construction
40	Poundland Limited	Wholesale & retail trade
41	Powertrain Products Limited	Other services
42	Pyle Street (Agg2) Ltd	Other services
43	Quest 4 Alloys Limited	Wholesale & retail trade
44	R K Transport Services Limited	Transport
45	Regardcatch Limited	Other services
46	Response Electronics Ltd	Wholesale & retail trade
47	RIO Stainless Engineering Limited	Metals & metal products
48	Staff Select Ltd	Education, Health
49	T.C.Morris Limited	Food, beverages, tobacco
50	Techworx Ltd	Metals & metal products
51	Triple R Solutions Limited	Machinery, equipment, furniture, recycling
52	Valent Applications Limited	Other services
53	Ventstand Limited	Wholesale & retail trade
55	W.H. Tildesley Limited	Metals & metal products
54	W.H. Tildesley Limited	Metals & metal products
56	W.H.Marren Limited	Wholesale & retail trade
57	W.R.R.Pedley & Co.Limited	Metals & metal products
58	Wedge Group Galvanizing Limited	Metals & metal products
59	Willenhall Commercials Limited	Wholesale & retail trade
60	Willenhall Fasteners Limited	Wholesale & retail trade
61	Wolverson Fitness Limited	Wholesale & retail trade
62	Wolverson X-Ray Limited	Wholesale & retail trade
63	Wootton & Wootton (T & D) Limited	Construction

Local Sector Information Example – Advanced Manufacturing in Walsall

# BLACK COUNTRY SECTOR DASHBOARD - Advanced Manufacturing - Walsall

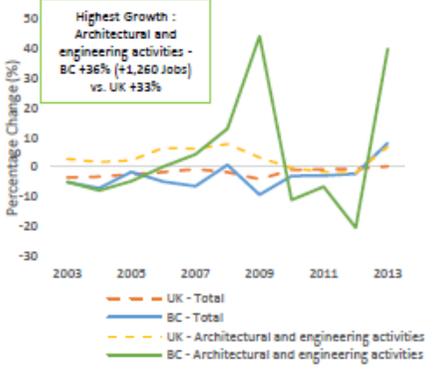
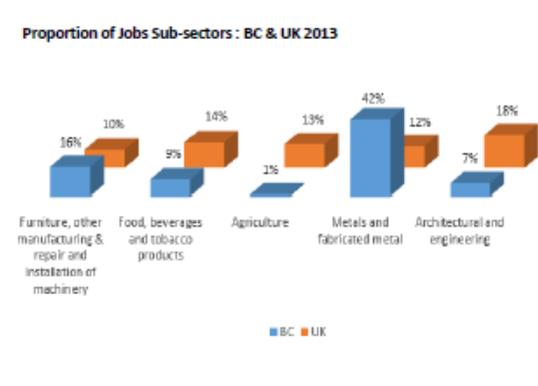
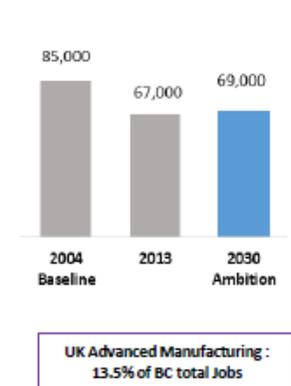
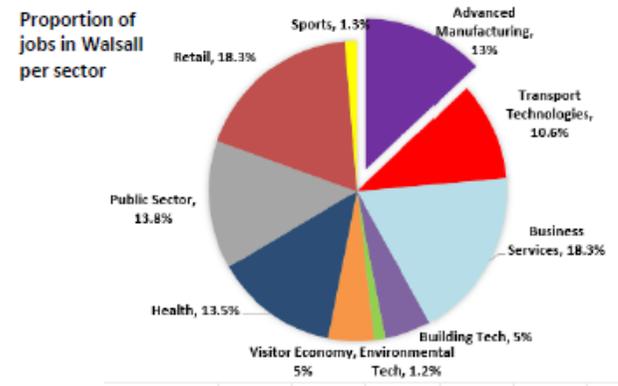


**Black Country Strategic Economic Plan**  
People, Place & Business : 12 strategic programmes

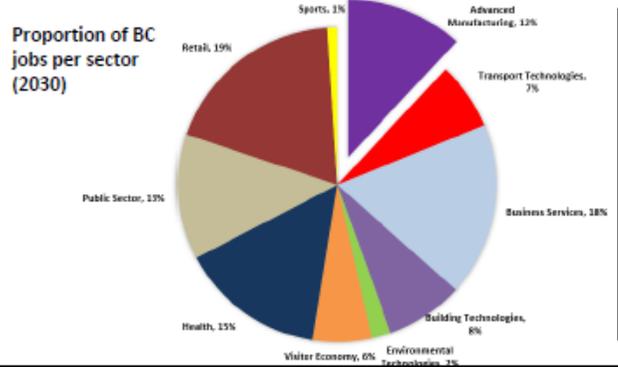
**Black Country Transformational & Enabling Sectors**

**Transformational Sector: Advanced Manufacturing**

**CURRENT JOBS** Current Jobs: 13,500 (13% of total jobs in Walsall) | BC Growth Ambition: 69,000 (+ 2,000 jobs) | Most important sector 2013: Metals and fabricated metal goods (42%) | Growth Rates 2003 - 2013: BC : - 27.1% (-25,000 Jobs) UK : - 16.2%



**FUTURE JOBS (2030)** Future Jobs: 69,000 (12% of total BC jobs) | Most important sector 2030: Metals and fabricated metal goods (37%) | 2,300 total requirement in food, drink and tobacco sector. 13,600 net requirement in the rest of manufacturing



- Future trends:**
- Automation and robotics ↑
  - Use of electronics ↑
  - 3D printing ↑
  - Lightweight materials technology ↑
  - Unskilled manual jobs ↓
  - STEM related jobs ↑

