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SOUTH WEST ENGLAND REGIONAL REPORT LABOUR MARKET CHARACTERISTICS AND A SUMMARY OF CHALLENGES AND OPPORTUNITIES.

**REPLAY-VET - *Strengthening key
competencies of low- skilled people in vet
to cover future replacement positions***

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*The University of Exeter's
Marchmont Observatory
have studied the
construction sector
within the South West of
England and within the
Heart of the South West
LEP area in particular.*

*They have been
evaluating the potential
that lies within the sector
for recruiting and
employing workers with
relatively low skill levels.*

*They find that the sector
has considerable
potential given the ageing
workforce and a growth
both in housebuilding
and in major civil
engineering projects -
including a major new
nuclear power station.*

*Significant interviews and
detailed statistical
analysis have taken place
resulting in the analysis
of a number of good
practices.*

*The report makes
recommendations for
how the work can be
taken forward through
events the project Toolkit
and secondly as
stakeholders seek to
learn and roll-out of the
Build Plymouth model
within other parts of the
LEP geography.*

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REPLAY-VET is funded with support from the European Union's Erasmus+ Programme

SECTION 1. CHARACTERISATION OF THE LOW SKILLED LABOUR MARKET IN THE SOUTH WEST ENGLAND REGION

LABOUR MARKET INDICATORS	EU		SW England	
	2015	2008 - 2015	2016	2008 - 2015
1- Population on 1 January (000)	508,504.0	2	5,443,186.0	5
2- Population between the ages of 15-64(000)	333,158.0	-1	3,392,316.0	3
3- Total occupation(000)	220,890.0	-1	2,690.9	5
4- Employment between the ages of 15-64 (000)	215,770.0	-2	2,557.5	4
5- Employment rate(%population age group 20-64)	70.0	0	80.5	2
6- Employment rate(%population age group 15-64)	65.6	0	76.8	2
7- Employment rate(%population age group 15-24)	33.0	-13	56.1	-4
8- Employment rate(%population age group 25-54)	78.0	-2	85.4	1
9- Employment rate(%population age group 55-64)	53.3	15	68.3	7
10- Full time employment rate (%population age group 20-64)	56.7	-3	58.4	0
11- Self-employment (%total occupation)	13.8	-14	17.4	11
12- Part-time employment rate (%total occupation) (to 2014)	19.6	7	30.6	5
13- Fixed term contract (%total employees)	14.1	-1	6.4	13
14- Employment in services (%total occupation)	70.9	6	78.8	4
15- Employment in Industry (%total occupation)	24.0	-14	18.8	-18
16- Employment in Agriculture(%total occupation)	4.5	-15	1.8	5
17- Economic activity rates(%population 15-64 age group)	72.5	2	80.0	1
18- Economic activity rates(%population 15-24 age group)	41.5	-7	63.5	-4
19- Economic activity rates(%population 25-54 age group)	84.2	0	87.8	1
20- Economic activity rates(%population 55-64 age group)	57.3	16	70.1	7
21- Total Unemployment (000)	22,898.0	27	109.6	-1
22- Unemployment rate(% active)	9.4	26	3.9	-6
23- Youth Unemployment rate (%active 15-24 year group)	20.4	22	11.6	-3
24- Long-term unemployment rates (%active)	4.5	42	1.0	13
25- long-term unemployment (% total unemployment)	48.3	23	24.3	21
26- Youth Unemployment rate (%population 15-24 age group)	8.4	18	7.4	-7
27- Employment rate of the population with low qualification 25-64	53.0	-7	64.1	1

1.1 Social and labour characterization of the population with low qualification

Analysis of the SW England labour market compared to EU 28

SW England is one of nine official regions of England. It is the largest in area, covering 23,800 km² and the counties of Gloucestershire, Bristol, Wiltshire, Somerset, Dorset, Devon and Cornwall, as well as the Isles of Scilly. 5.44 million people live in South West England representing 8.39% of the UK's population.

There is no regional government or powers but there are county level and sub-county level authorities and sub-regional Local Enterprise Partnerships which operate as small development agencies.

Its potential workforce (population between the ages of 15 and 64) is 62.3%, lower than in the EU as a whole reflecting the ageing demographic in the region. Between 2008 and 2015 the SW England saw an increase in its potential workforce of 4% while the whole of EU28 had a decline of -2%. Similarly, the total working population in SW England rose by 5% between 2008 and 2015 whilst it shrank by -1% for the EU.

The Employment rate in all age groups is higher than in the EU. The age group 20 to 64 has 80.5% employment compared to 70% in the EU. The only decline is in the employment rate of 15 – 24 (-4% in SW England) due to people staying longer in education.

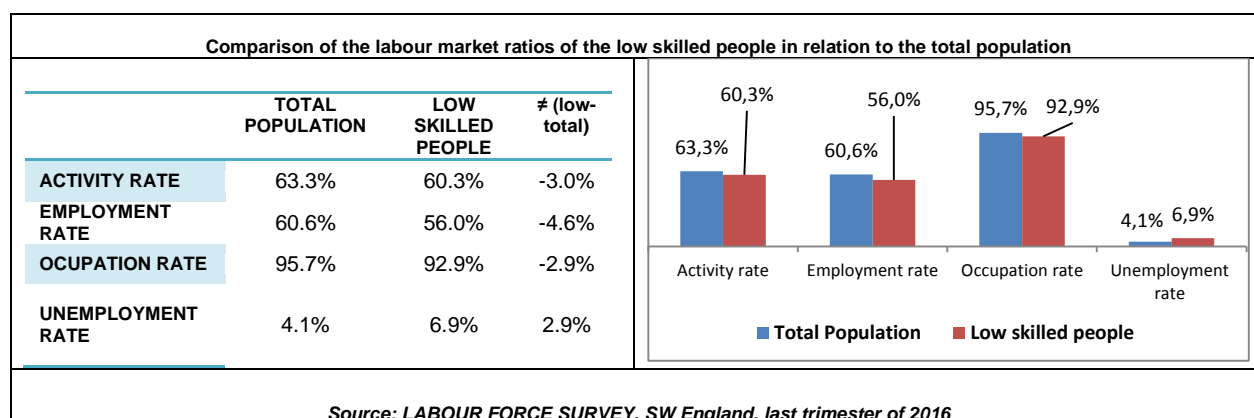
The self-employed population has increased in SW England whilst it declined in the EU. This was the same for fixed-term contract jobs. Employment in industry declined in SW England

and EU whilst employment in agriculture increased in the UK against a decline in the EU. Economic activity rates are notably higher than the EU and unemployment notably lower.

1.2 Low skilled labour market characterization

Activity and occupation

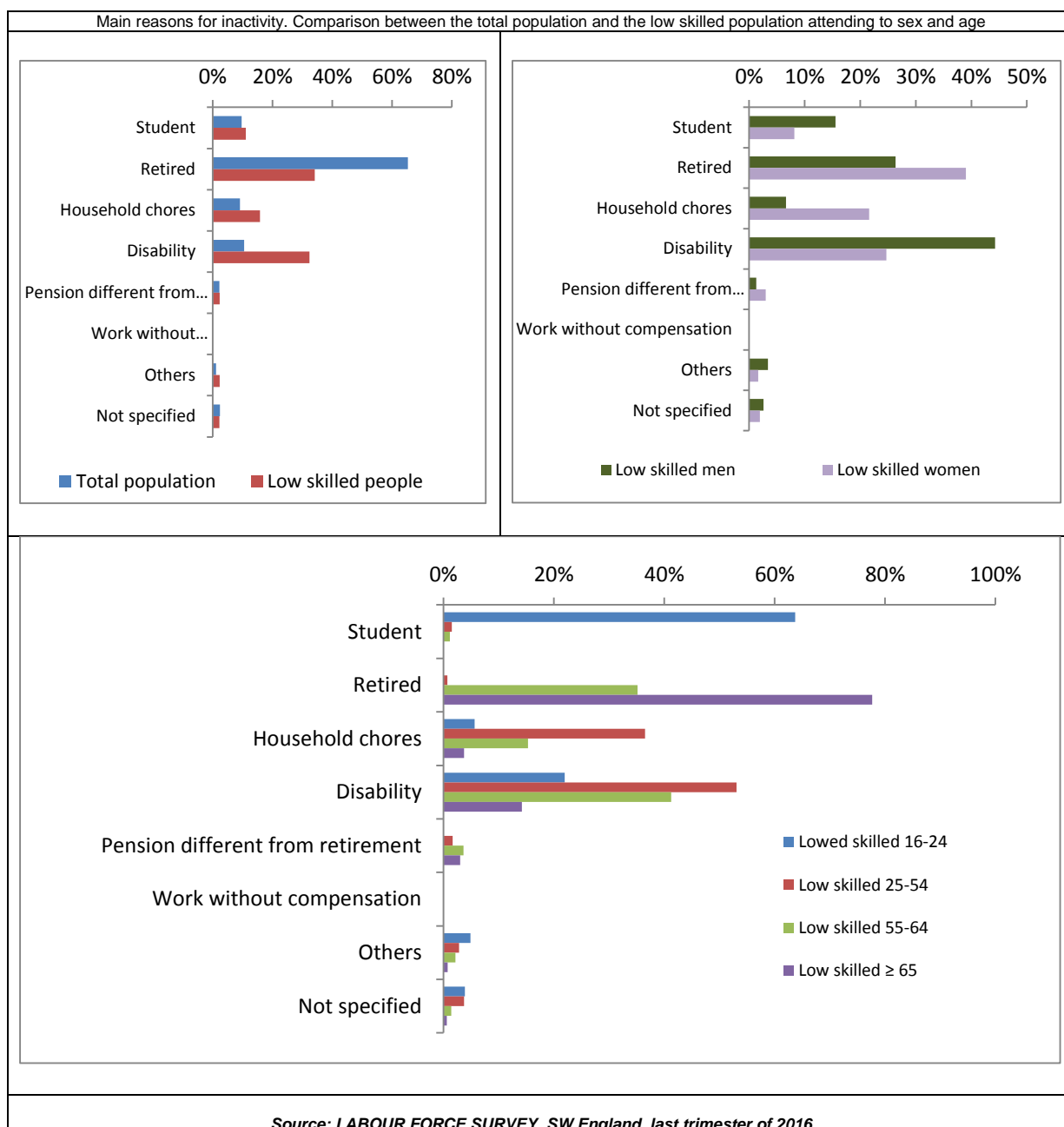
For this report, the population with low qualification has been defined as those older than 16 years old and with educational levels going from ISCED 0 to ISCED 2, which include preschool education (ISCED 0), primary education or first stage of basic education (ISCED 1) and first cycle of secondary education or second cycle of basic education (ISCED 2). The data used are those of 2016's last trimester. The population with low qualifications in the SW England represents 13% of the region's total population. People with low qualifications in the SW England have lower activity, employment and occupation rates than typical across the total population and have a higher unemployment rate.



The main reasons for the aforementioned inactivity of the less qualified people differ from those of the rest of the population. Generally, across the SW population as a whole, residents are inactive mainly due to retirement with much smaller and similar numbers inactive due to being students, looking after the home and/or family and disability. While retirement is also the main reason for retirement among the low skilled population, disability accounts for almost as many low skilled people being inactive.

As might be expected there are distinct differences in the reasons for inactivity among the low skilled by gender. For example, retirement is the most common reason for inactivity among low skilled women, and disability among men. Furthermore, women are more likely than men to be inactivity due to family and home commitments but are also more likely to be retired or students.

The results also reveal expected trends by age with most young low skilled people being students and those aged 65 and over being retirement. Disability is the most common reason for inactivity among those aged 25 to 54 and 55 to 64 years.

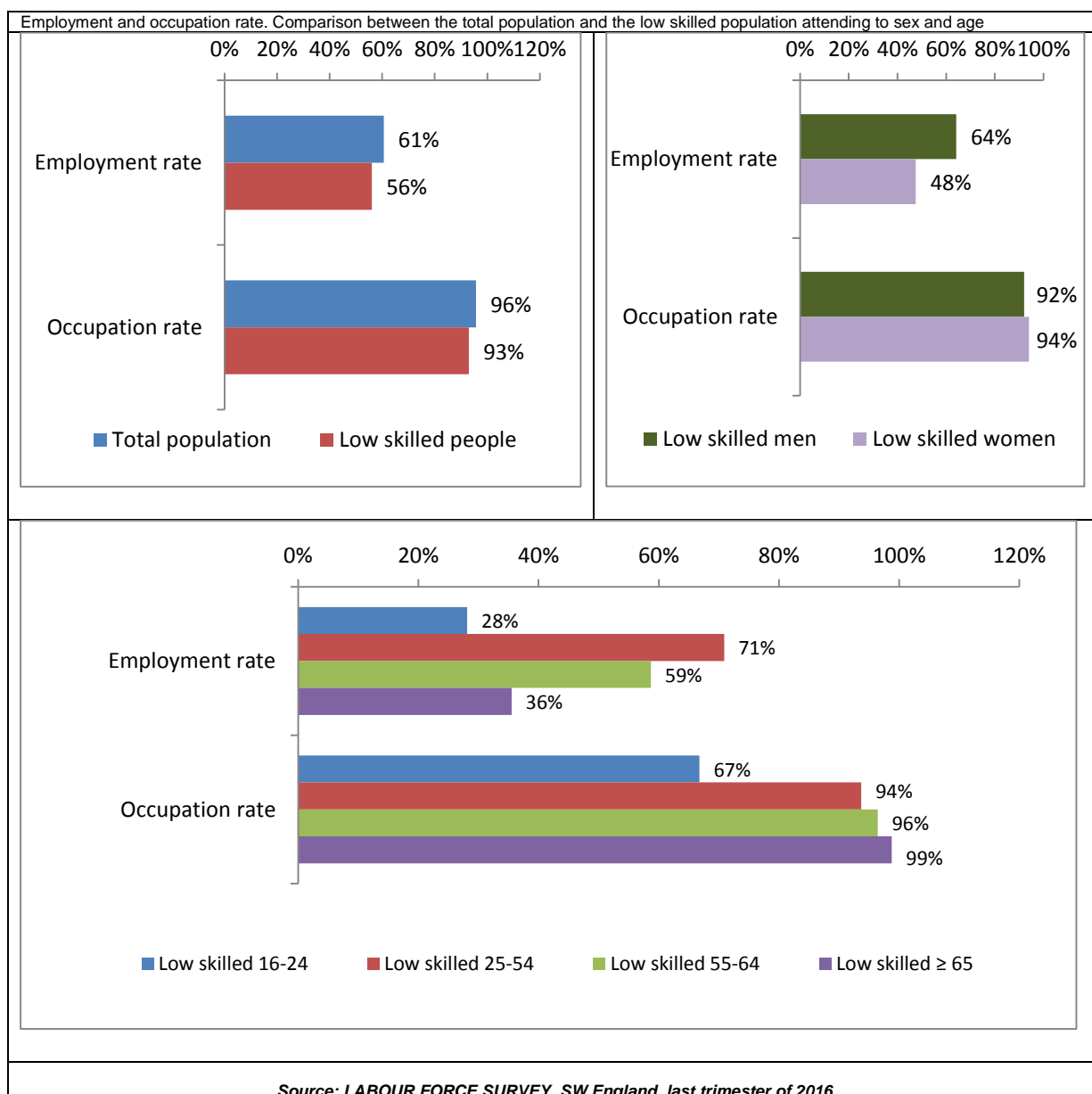


1.3 Employment rate

People with low skills in the SW of England have lower employment and occupation rates than the general population. The lower employment rate of low skilled women compared to men low skilled men reflects the higher inactivity rate among the former particularly to look after the home and family. Interestingly, low skilled women have a slightly higher occupation rate than men, suggesting that when low skilled women do participate in the labour market, they are slightly more successful than men in securing employment. This is potentially due to two reasons: firstly, low skilled women may only join the labour market if they feel they have a reasonable chance of securing success – that is, long-term unemployed women may withdraw from the labour market particularly if they have a working partner – and secondly, there may be more opportunities for low skilled employment in occupations that have traditionally been dominated by women – such as retail assistants, care assistants and cleaners.

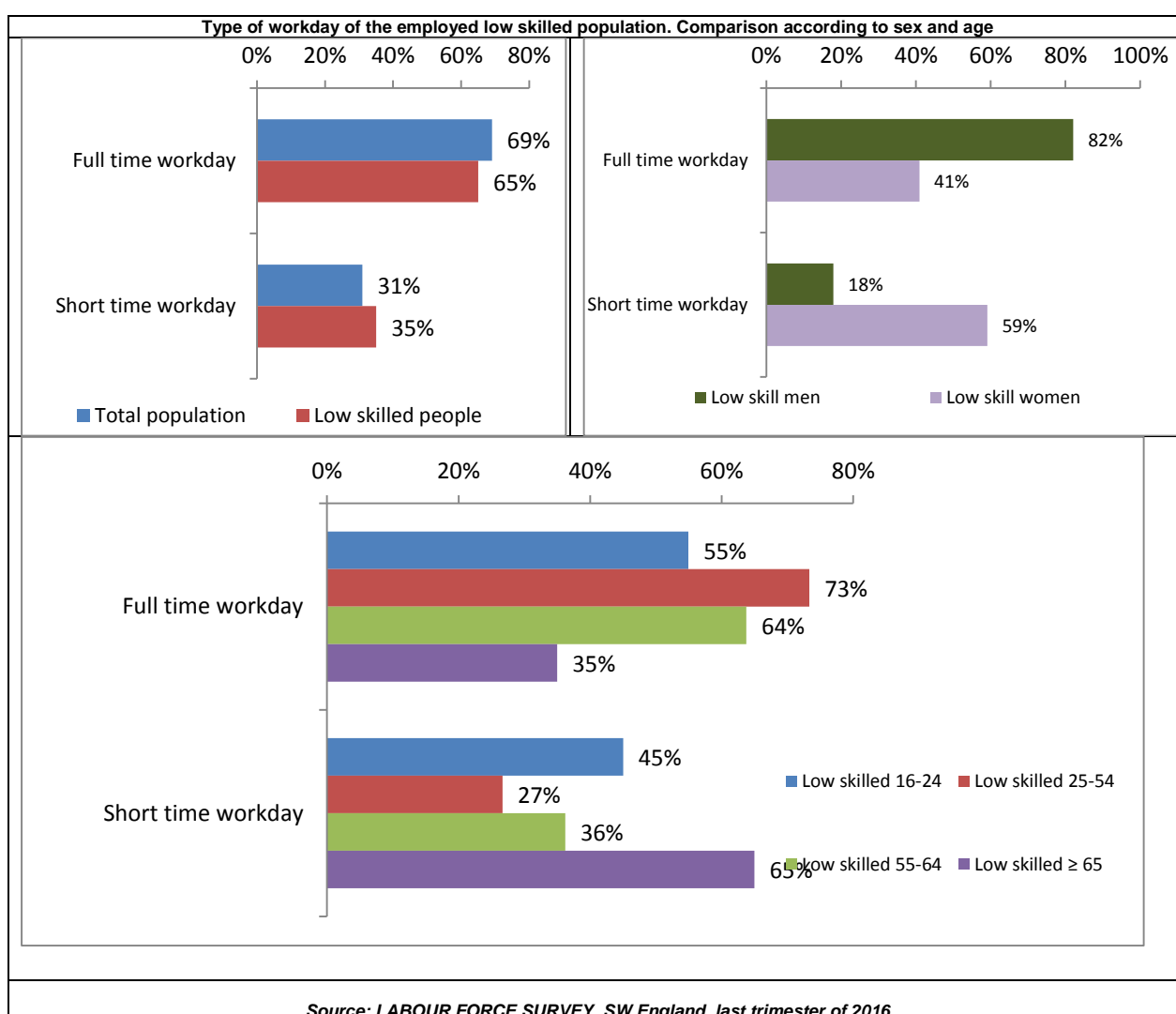
The statistics reveal some interesting trends by age:

- Low skilled young people (aged 16 to 25 years) have considerably lower employment and occupation rates than older low skilled age groups. While many young people are students – reflected in the lower employment rate – those that do participate in the labour market are less likely to be employed than older people. This is perhaps due to be expected given that they have less experience to offer employers – a distinct disadvantage in a competitive labour market – but also young people tend to change jobs more frequently than other people, generating higher levels of 'frictional unemployment' as they move from job to job.
- Low skilled people aged 25 to 54 have the highest employment rates of all the age groups studied suggesting that this is the peak age for economic activity. However, rates will vary significantly by gender. While the occupation rate of this group is very high, at 94%, it is marginally lower than older age groups. This is probably because people within this age group may not have built up the financial reserves or entitlements to withdraw from the labour market if they struggle to find work.
- The employment rate for people at 55 to 64 is 12 percentage points lower than those for people in the younger category suggesting that many people leave the labour market before they are eligible for a state pension. This may be as shown earlier due to disability or ill-health or simply because they do not need or wish to work. The occupation rate for this group is high, those that struggle to find work, and have the financial means to do so, will become inactive rather than long-term unemployed.
- Finally, over a third of older, low skilled people are in employment. The propensity of people to work beyond the age they are eligible to draw private and state pensions has increased in recent years possibly reflecting pressures on household disposable incomes.

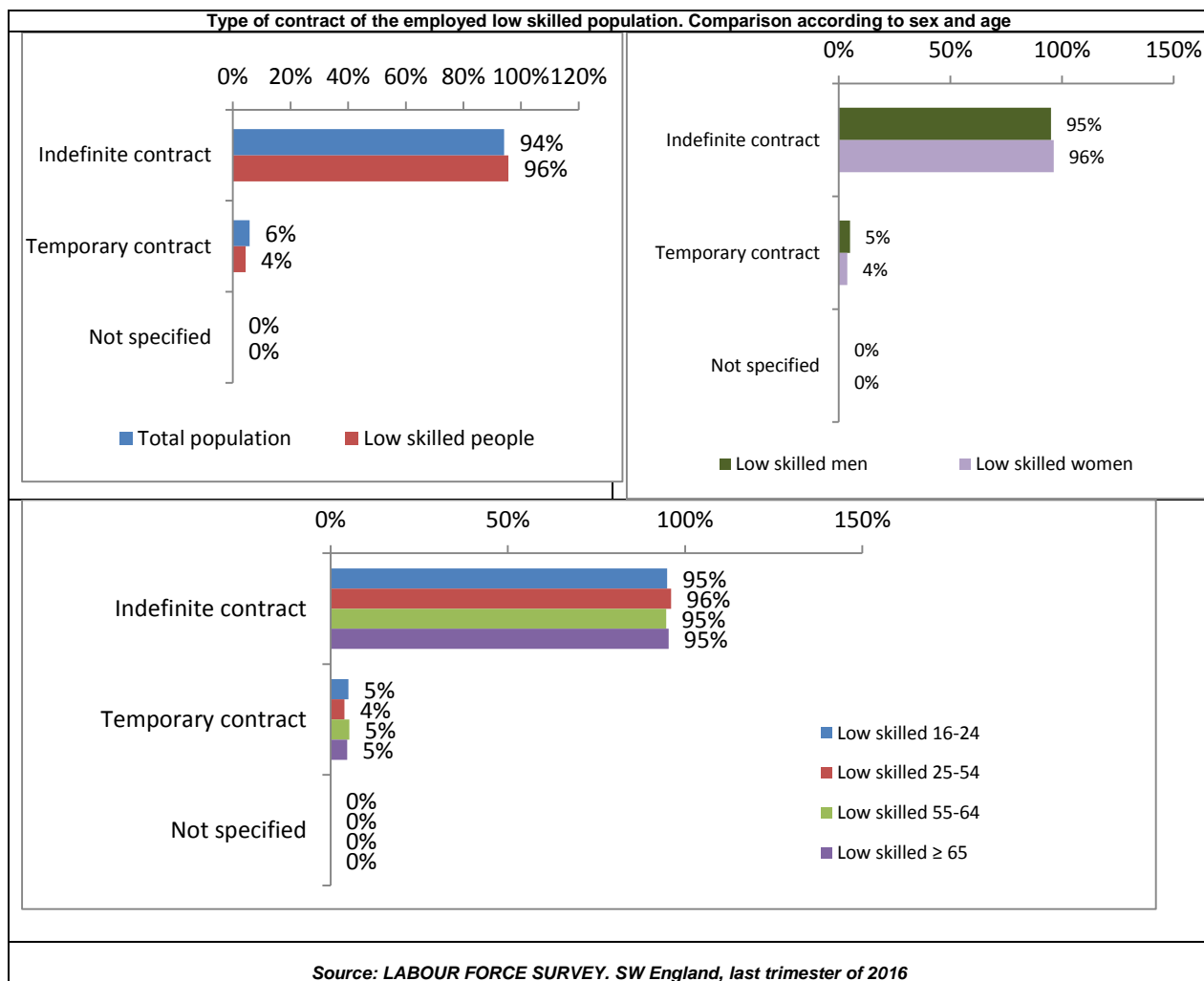


1.4 Labour conditions

Around than two-thirds (65%) of low skilled people in SW of England work full time. This is a slightly lower share of the employed population than people with higher levels of qualification. Furthermore within the low skilled population, women and people within the youngest (16 to 24) and oldest (≥ 65 years) age groups are least likely to work full time and consequently, most likely to work part time hours.



The vast majority (96%) of low skilled people in the SW of England have a permanent contract of employment and furthermore are marginally more likely to have this kind of contract than the working population as a whole. There is little or no difference in the propensity of low-skilled people to have a permanent contract by age or gender.



1.5 Participation by sector and occupation

Activity sectors

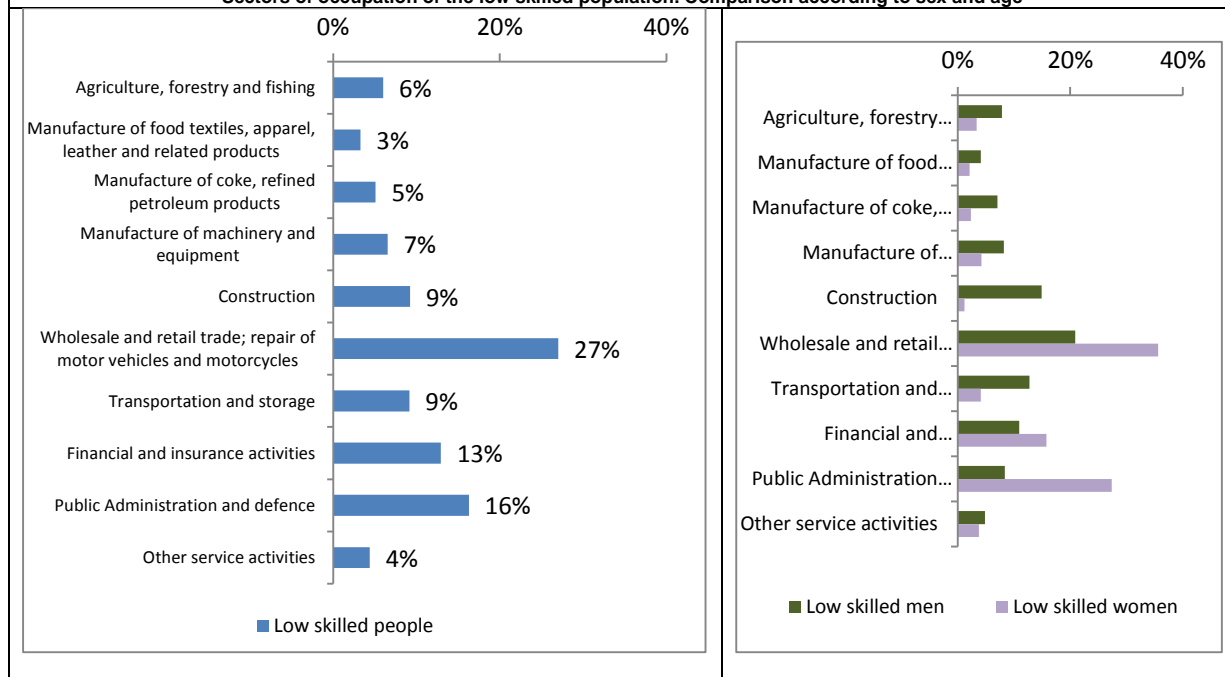
The distribution of low-skilled people across industry sectors is such that *wholesale and retail trade; repair or motor vehicles and motorcycles* is the biggest single employer accounting for more than one-quarter (27%) of the employment of low skilled people. Beyond this, the biggest sectors are *public administration and defence* (16%), *financial and insurance activities* (13%), *transportation and storage* (9%) and *construction* (9%).

There are clear differences between the profile of low skilled men and women by sector. For example, women tend to be concentrated within fewer sectors with the vast majority employed in *wholesale and retail trade; repair or motor vehicles and motorcycles*, *public administration and defence* and *financial and insurance services*. Compared to men, a smaller share of women work in each of the production sectors. Low skilled men, by contrast, are more evenly distributed across the industry sectors than low skilled women and while *wholesale and retail trade; repair or motor vehicles and motorcycles* is the most common employer, it accounts for a considerably smaller share than women. *Construction* and *transportation and storage* are the next biggest employers of low skilled men.

By age, the main patterns are:

- Clear concentration of employment of young (16 to 24) low skilled people within the wholesale and retail trade & repair of motor vehicles and motorcycles (accounting for almost two-thirds of employment within this group);
- Similar distributions between those age 25-54 and 55 to 64 with the most common sectors being wholesale and retail trade & repair of motor vehicles and motorcycles, public administration and defence and financial and insurance activities. Construction, is a more significant employer of people age 25 to 54 than those aged 55 to 64, possibly reflecting the physicality of the some of the trades. The fact that transportation and storage is a slightly more common sector among the older groups suggests that some construction workers might move into the former as they age.
- Significant proportion of low-skilled people aged 65 and over, working in the agriculture, forestry and fishing sector. This may partly reflect the high level of self-employment in the industry.

Sectors of occupation of the low skilled population. Comparison according to sex and age



LOW SKILLED PEOPLE

	16-24	25-54	55-64	> 65
Agriculture, forestry and fishing	2%	3%	4%	23%
Manufacture of food textiles, apparel, leather and related products	1%	4%	4%	1%
Manufacture of coke, refined petroleum products	0%	6%	7%	2%
Manufacture of machinery and equipment	1%	8%	8%	1%
Construction	8%	12%	6%	6%
Wholesale and retail trade; repair of motor vehicles and motorcycles	62%	25%	24%	28%
Transportation and storage	2%	9%	13%	8%
Financial and insurance activities	11%	13%	13%	13%
Public Administration and defence	7%	17%	20%	11%
Other service activities	6%	5%	2%	7%

Source: LABOUR FORCE SURVEY. SW England, last trimester of 2016

Professional categories

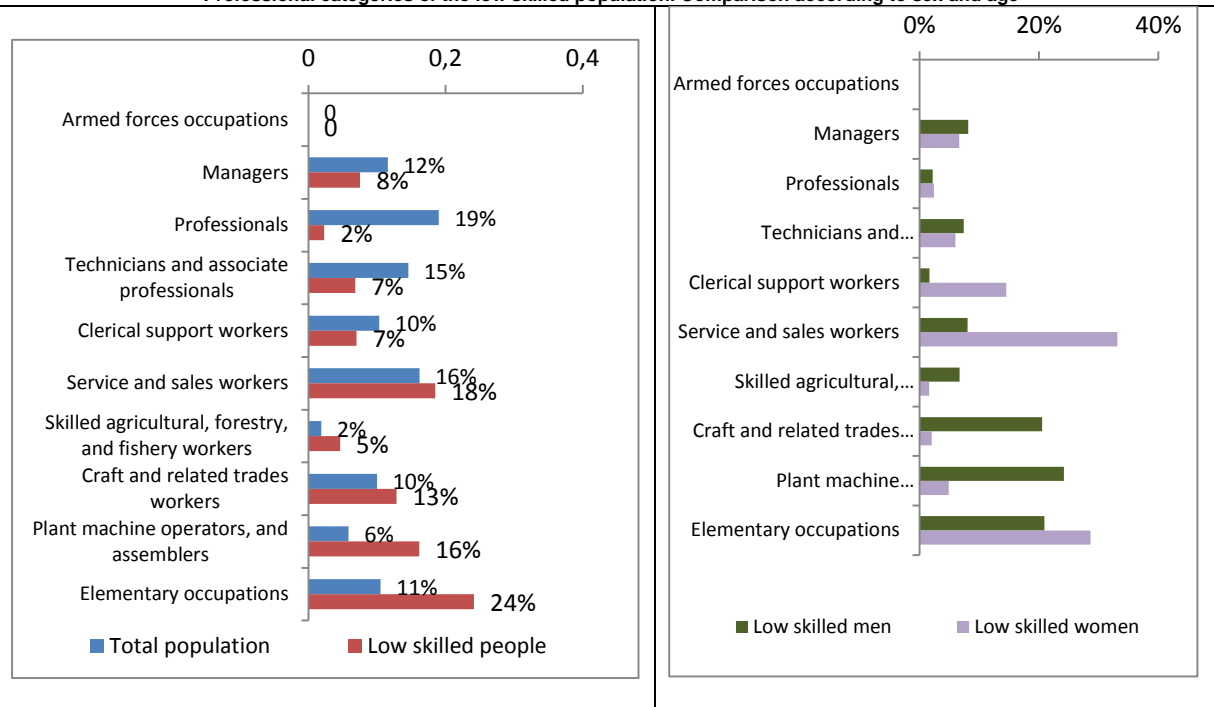
Perhaps unsurprisingly, low skilled people have a different distribution across occupations than the employment population as a whole. The key observation being a concentration within occupations that tend not to require formal vocational or professional qualifications to enter. This includes, for example, elementary occupations (such as cleaners and hospital porters and car park attendants), service and sales workers (care assistants, check out operators), plant machine operators and assemblers but also craft and related trades workers. At the same time, very few low-skilled workers are employed in professional occupations. Interestingly, almost one in every 12 low skilled workers is a manager or senior official.

As with industry sector, low skilled women tend to be concentrated in a smaller number of occupations than low skilled men, most notably in service and sales workers and elementary occupations but also clerical support workers. Low skilled men are more evenly distributed across the occupations but with most employed as plant machine operators and assemblers, elementary occupations and craft and related trades workers.

Low skilled young people (16 to 24) are concentrated within three main occupations with almost half employed as plant machine operators, and assemblers, one quarter as clerical support workers and one fifth within an elementary occupation.

Patterns of employment by age group do not differ substantially across the older age groups. The main observations are a decline in the proportion working in either of skilled trades categories and in plant machine operatives and assemblers in the older groups and a corresponding increase in the share working in service, sales and clerical occupations. The share of people aged 65 and over working in armed forces occupations is much higher than in younger age groups. It is not clear why this is but could be a statistical anomaly given the relatively small number of counts for this combination.

Professional categories of the low skilled population. Comparison according to sex and age



LOW SKILLED PEOPLE

	16-24	25-54	55-64	> 65
Armed forces occupations	1%	7%	7%	16%
Managers	0%	3%	2%	2%
Professionals	9%	8%	5%	5%
Technicians and associate professionals	5%	5%	11%	11%
Clerical support workers	24%	17%	19%	20%
Service and sales workers	0%	3%	4%	13%
Skilled agricultural, forestry, and fishery workers	9%	16%	9%	6%
Craft and related trades workers	8%	17%	20%	9%
Plant machine operators, and assemblers	45%	25%	21%	18%
Elementary occupations	19%	18%	17%	18%

Source: LABOUR FORCE SURVEY. SW England, last trimester of 2016

1.6 Unemployed low skilled people

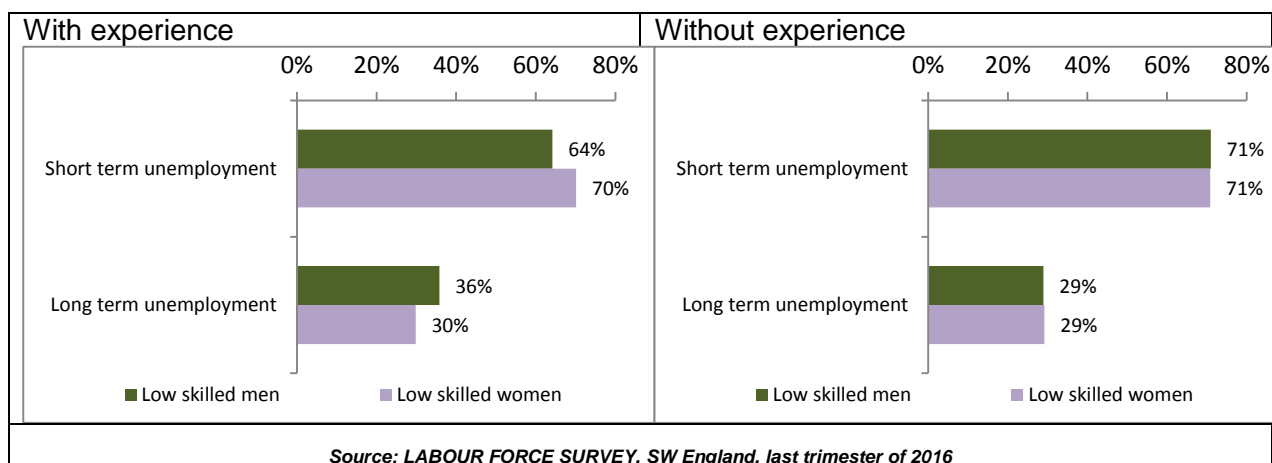
Unemployment is higher among low skilled people (7%) than the general population as a whole (4%). Most unemployed low skilled people have experience of work although one-quarter (27%) do not have any work experience. This is a similar profile to the total population. Low skilled unemployed people both with and without experience are more likely to be long term unemployed than unemployment people more generally.



Unemployed low skilled women are more likely to have experience than unemployed low skilled men and are less likely than low skilled men to be unemployed.



While low skilled men and women without work experience are equally likely to be long-term unemployed, low skilled unemployed men with work experience are slightly more likely to be long-term unemployed than women with experience. This may be less to do with experience per se but with the nature of that experience and the industries and occupations in which it was obtained.



Unemployment is a particular feature of the youth labour market and is particularly acute among young men (41%). Lack of work experience is rarely a problem among low skilled unemployed people aged 25 and over although, perhaps unsurprisingly, it is characteristic of low skilled unemployed young people (aged 16 to 24). Lack of work experience carries a penalty of higher likelihood of long term unemployment across all age groups but age is also a factor: more than three-fifths (62%) of low skilled unemployed people aged 55 to 64 with experience of work were long-term unemployed.

Comparativa de la tasa de desempleo de la población con baja cualificación en relación con el género.					
LOW SKILLED PEOPLE					
		16-24	25-54	55-64	≥ 65
With experience	Short term unemployment	100%	67%	38%	55%
	Long term unemployment	0%	33%	62%	45%
	Unemployment with experience	28%	99%	94%	100%
Without experience	Short term unemployment	74%	0%	9%	0%
	Long term unemployment	26%	100%	100%	0%
	Unemployment without experience	72%	1%	6%	0%
UNEMPLOYMENT RATE		32%	6%	4%	1%

Source: LABOUR FORCE SURVEY. SW England, last trimester of 2016

1.7 Statistical analysis conclusions

As might be expected, low skilled residents in the SW of England experience less favourable labour market outcomes than the general population. For example, they are less likely to be economically active, less likely to be employed¹ and are more likely to be unemployed. When employed they are marginally more likely to work part time and are more likely to work in occupations that typically do not require vocational or professional qualifications such as elementary occupations, service and sales occupations and plant machine operators and assemblers. In more detail, broad measures of labour market participation hide distinct patterns by age and gender:

¹ When expressed as employment and occupation rate.

- People with low skills are considerably less likely to be economically active than the population as a whole². This holds across both genders and all age groups with the notable exception of people aged 65 and over: **older people with low skills are significantly more likely than those with higher skills to be active within the labour market**. One could hypothesise that this is about constrained household income and financial imperatives to work although the particularly high level of employment in agriculture, forestry and fishing among this group also suggests that the predominance of self-employment and an inter-dependence between housing and income may also be a factor.
- Low skilled young peoples' lower levels of economic activity can only be partially explained by their more frequent student status. **They are also disadvantaged within the labour market as evidenced by their lower occupation rate and higher unemployment rate**. Unemployment is a particular problem among young men with low qualifications and among all young people with no experience (which is the majority of them). This may partially reflect the range of employment opportunities available to low-skilled young people which are more heavily concentrated in a narrower range of occupations and industries - particularly wholesale and retail – which traditionally have been associated with part-time female employment and may therefore not be highly attractive to these workers. Almost half of low-skilled young people work as plant machine operatives, and assemblers although examining the occupational profile by age, suggests that these may function as entry level positions that eventually to lead to skilled craft positions.
- Patterns of labour market pattern by gender follow expected trends: for example, low skilled women are more likely than low skilled men to be inactive – probably reflecting the status as many as 'home-makers' and the existence of a working partner or other financial means of support - but those that are active, are generally less likely to be unemployed than men³ but are more likely to work part-time. Low-skilled women tend to be distributed across a narrower range of occupations and industries than low-skilled men – with a particularly high share of low skilled women working in wholesale and retail and public administration and within service and sales, elementary and clerical occupations.
- While low skilled men are more likely to participate in the labour market than low skilled women, those that are active are more likely to be unemployed. Unemployment is a particular feature among low skilled young men (41%) although it is also more than twice as high among low skilled men than low skilled women, aged 55 to 64. Employment in production industries and 'blue collar' occupations tends to peak within the 25 to 54 year age groups suggesting more limited opportunities in these fields for the inexperienced (i.e. young) and those who would struggle with the physical nature of the work.

² The same trend is evident for the employment rate.

³ Although low-skilled women aged 25 to 54 are more likely than low skilled men of the same age to be unemployed.

- Low skilled people are more likely than the general population to be inactive due to illness or disability and are significantly less likely to describe themselves as 'retired'. Reasons for inactivity by age and gender are as might be expected with women more likely than men to cite caring for house and home, young people describing themselves as students and the majority of low skilled people aged 65 and over describing themselves as retired.

SECTION 2. OPPORTUNITIES OF THE REPLACEMENT DEMAND FOR THE SW ENGLAND

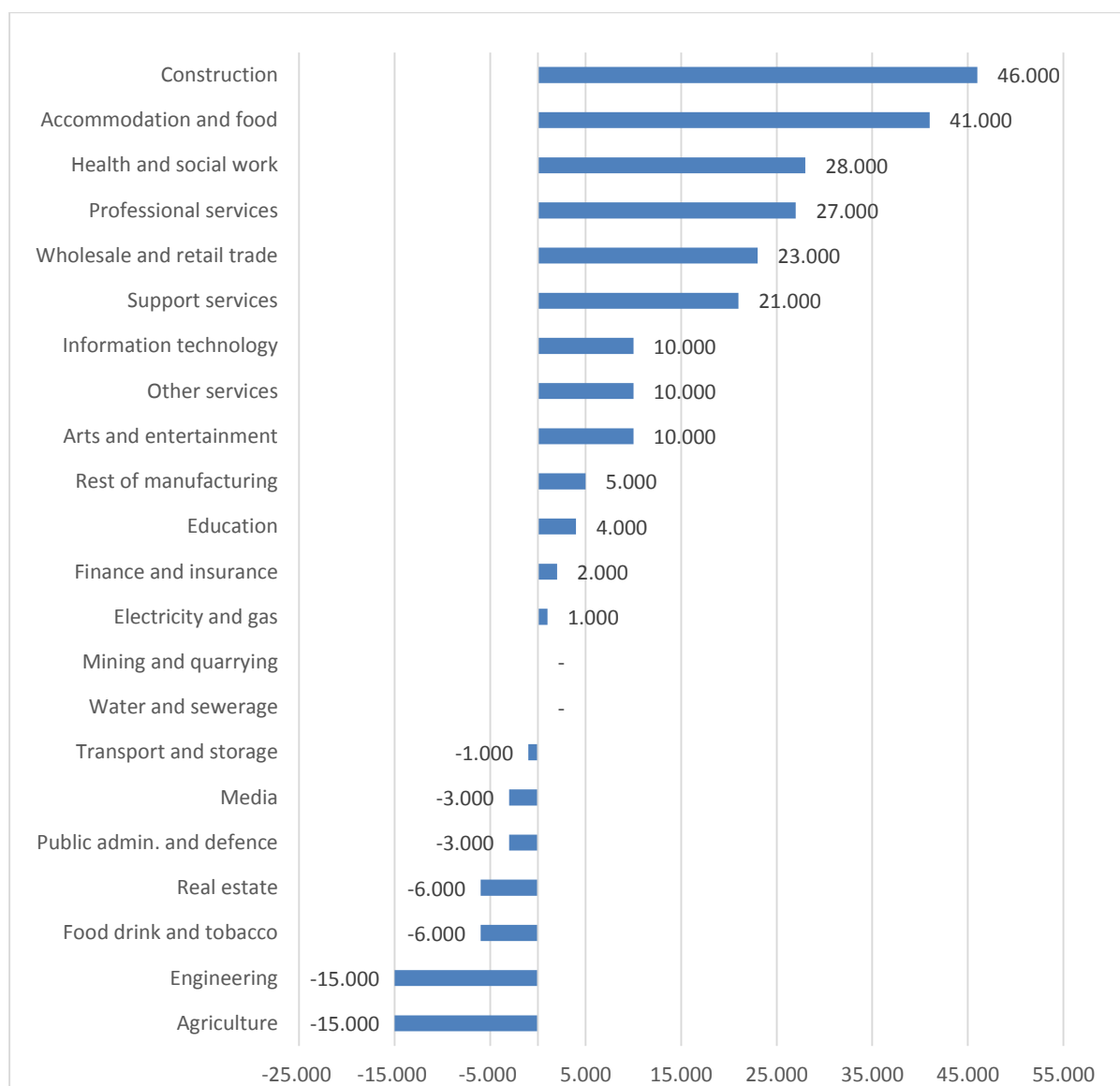
2.1. Projections for total employment by sector and occupations

Employment projections produced by the Institute of Employment Research on behalf of the (now defunct) UK Commission for Employment and Skills suggest that total employment in the South West of England is anticipated to increase by 180,000 between 2014 and 2024. This represents a smaller increase in employment in absolute and percentage terms than that recorded over the previous 10 years (2004 to 2014).

Very broadly, *marketed services* will generate the bulk of the net gain in employment although *construction* will also make a significant contribution. Employment in *non-marketed services*, incorporating primarily, education, health and public administration will also increase. Overall however, manufacturing and the primary sector & utilities will contract in employment terms.

Figure 1 provides a more detailed analysis of the employment projections by industry sector. The result suggest that employment in most of the sectors will increase, and most notably in construction (46,000) and accommodation & food (41,000) but with increases of 20,000 or more in health and social work (28,000), professional services (27,000), wholesale and retail trade (23,000) and support services (21,000). At the other end of the spectrum the largest contractions in the workforce is expected in engineering (-15,000) and agriculture (-15,000).

Figure 1 Projected (absolute) change in total employment by industry sector: 2014 and 2024



Source: Working Futures Employment Projections 2014-2024, UKCES

These sectoral trends have implications for the types of jobs that will be required.

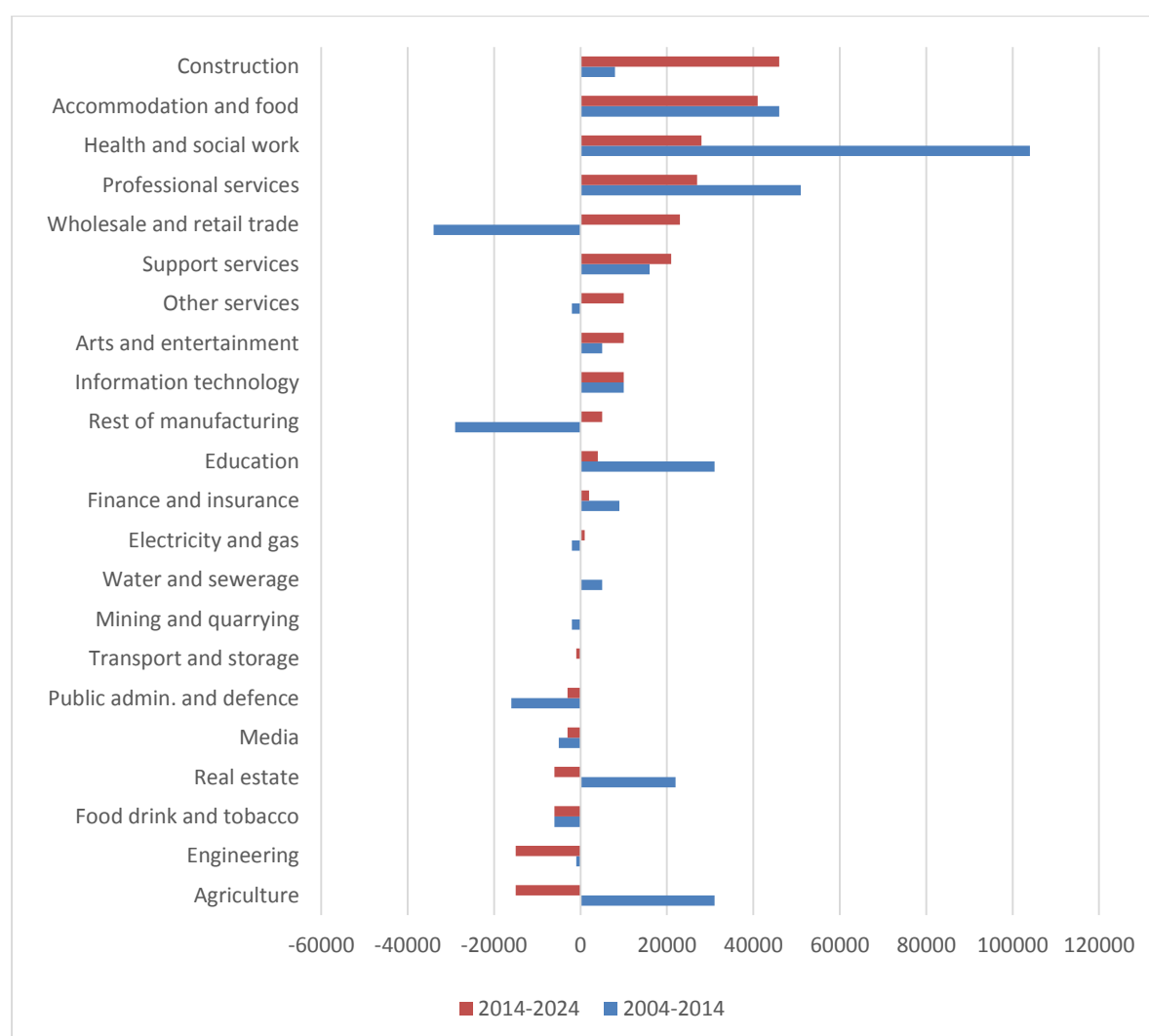
Overall, the number of people employed in most broad occupational categories will increase with the most openings created for:

- Caring personal service occupations (40,000)
- Corporate managers and directors (31,000)
- Business and public service professionals (25,000)
- Health professionals (21,000)

- Business, media and public service professionals (20,000)

Comparing the projections to employment estimates suggests firstly, that employment is expected to grow more slowly than in the recent past; and secondly, that the industrial mix is expected to be different. In particular, construction and wholesale and retail trade is anticipated to make a considerably larger contribution to employment growth over the next 10 years than it did over the previous 10 and a number of sectors that were considerable sources of employment growth in the past – including health and social work, professional services, education and finance and insurance, agriculture and real estate – are expected to create far fewer jobs in future or indeed, decline overall.

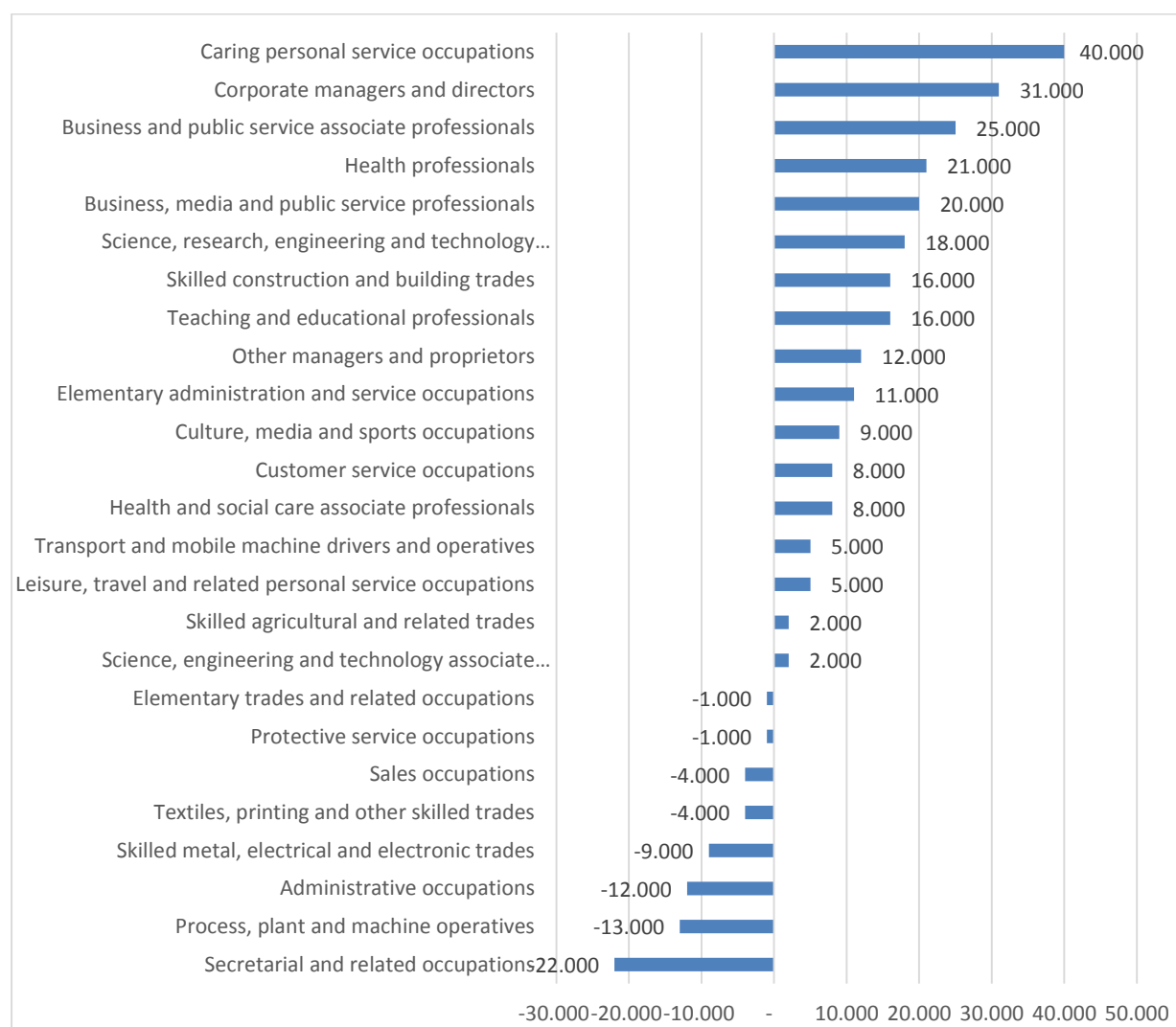
Figure 2 Absolute change in employment by industrial sector: 2004-2014 (actual) compared to 2014-24 (projections).



Source: Working Futures Employment Projections 2014-2024, UKCES

By contrast the biggest contractions in employment are anticipated among secretarial and related occupations (-22,000) and process, plant and machine operatives (-13,000) and administrative occupations (-12,000).

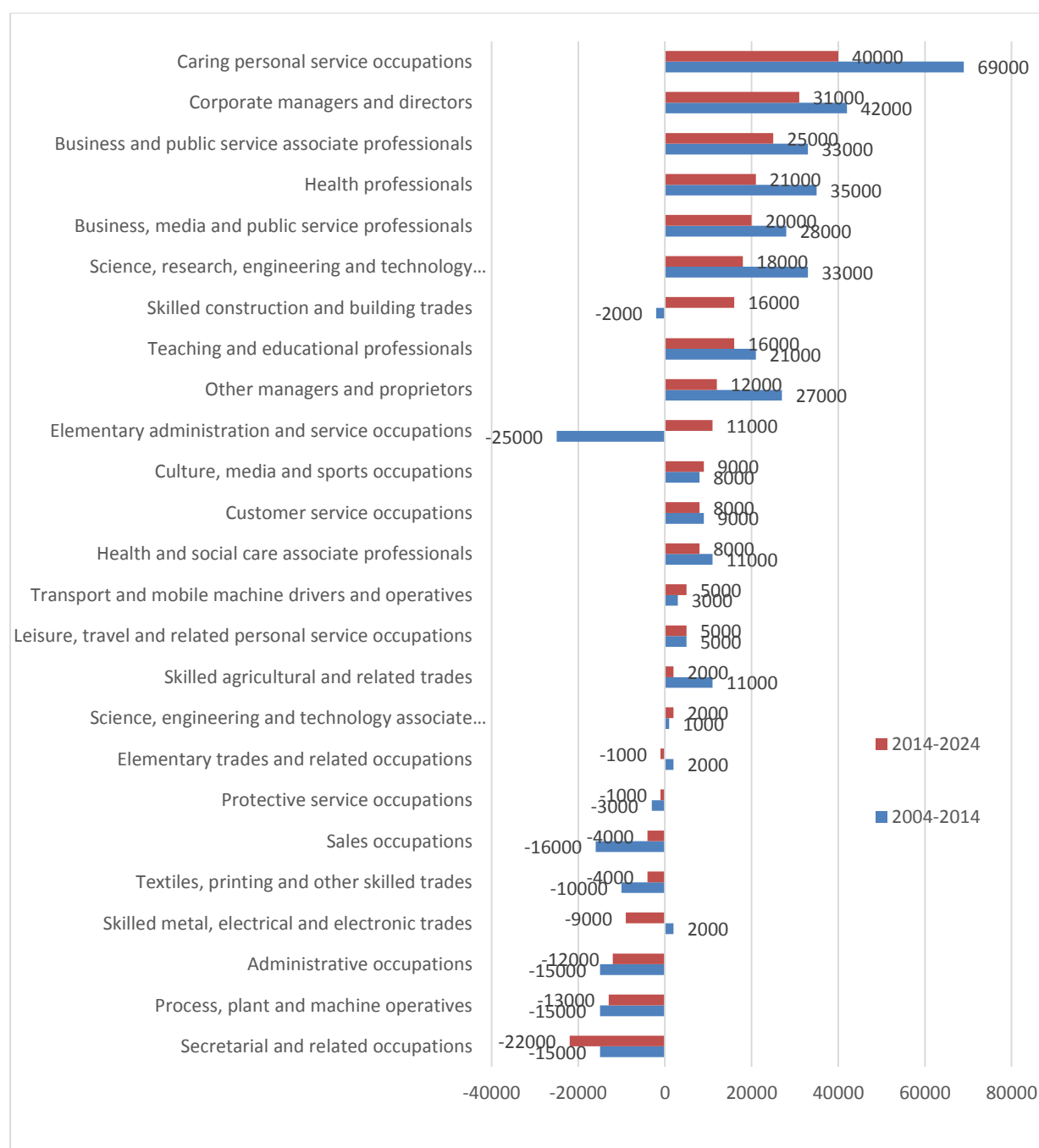
Figure 3 Projected (absolute) change in total employment occupation: 2014 and 2024



Source: Working Futures Employment Projections 2014-2024, UKCES

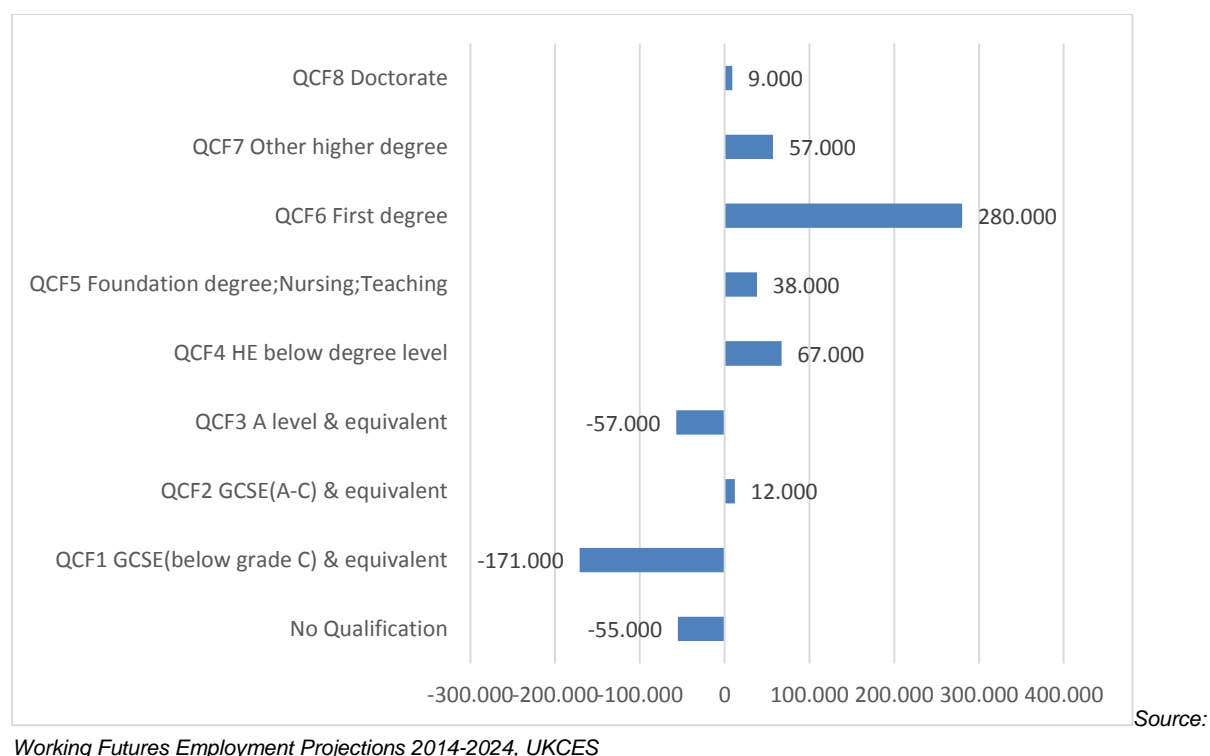
Whilst the increase in demand for most occupations is expected to be more muted over the next 10 years than it has been over the past 10 years, there are one two exceptions: the first reflecting the contribution of the construction sector, is the increase in number of skilled construction and building trades; and secondly, a reversal in the previous decline in elementary administration and service occupations.

Figure 4 Absolute change in employment by occupation: 2004-2014 (actual) compared to 2014-24 (projections).



As might be expected, given the expected expansion in professional occupations (+75,000) the projections reveal that most of the new openings will require a first degree or higher qualification (+346,000). Employment opportunities for those with no qualifications or at QCF1 (broadly equivalent to ISCED 0-2) with contract by 226,000.

Figure 5 Projected (absolute) change in total employment by qualification level: 2014 and 2024



In summary, the projections suggest a slight softening in the rate of increase in employment overall with construction and accommodation and food, health and social work, professional services, wholesale and retail trades and other services generating most of the increase in demand. These sector changes do not substantially alter the broad range of occupations sought although skilled construction and building trades and elementary administration and service occupations will become relatively more important future. There is a clear trend towards employment requiring higher level qualifications, particular at first degree level and a contraction in opportunities available for people with no qualifications or those that hold qualifications at QCF Level 1.

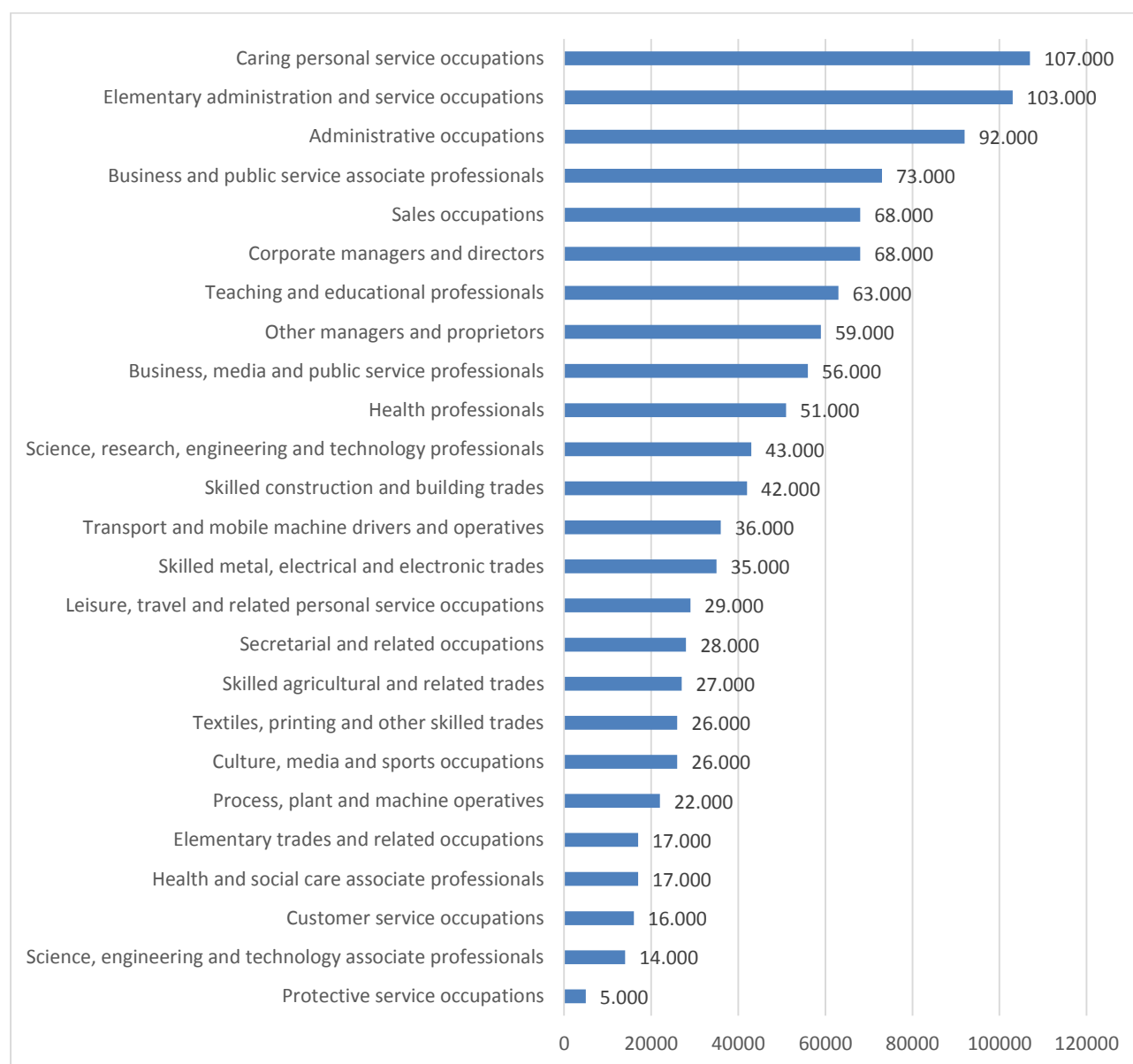
2.2. Trends in replacement demand

Expansion demand, the extent to which an industry or occupation is expanding or contracting in terms of the total number of people employed – represents a fairly small share of the total requirement for labour. Many more people are required to fill jobs vacated through retirement or people changing jobs or moving out of the area. Within the South West of England, this 'replacement demand' will create more than 1 million job openings – many more than those expected to be created through expansion demand.

Replacement demand within the South West of England is more evenly spread across the broad occupational categories than expansion demand - which is more heavily concentrated in the professional, managerial and technical occupations. While professional occupations also account for the largest share of replacement jobs, most of the remainder are fairly broadly evenly spread across skilled trades, caring, leisure and other services, associate professional and technical, managers and senior officials, administrative and secretarial occupations. The residual is split between sales and customer services and process, plant and machine operatives.

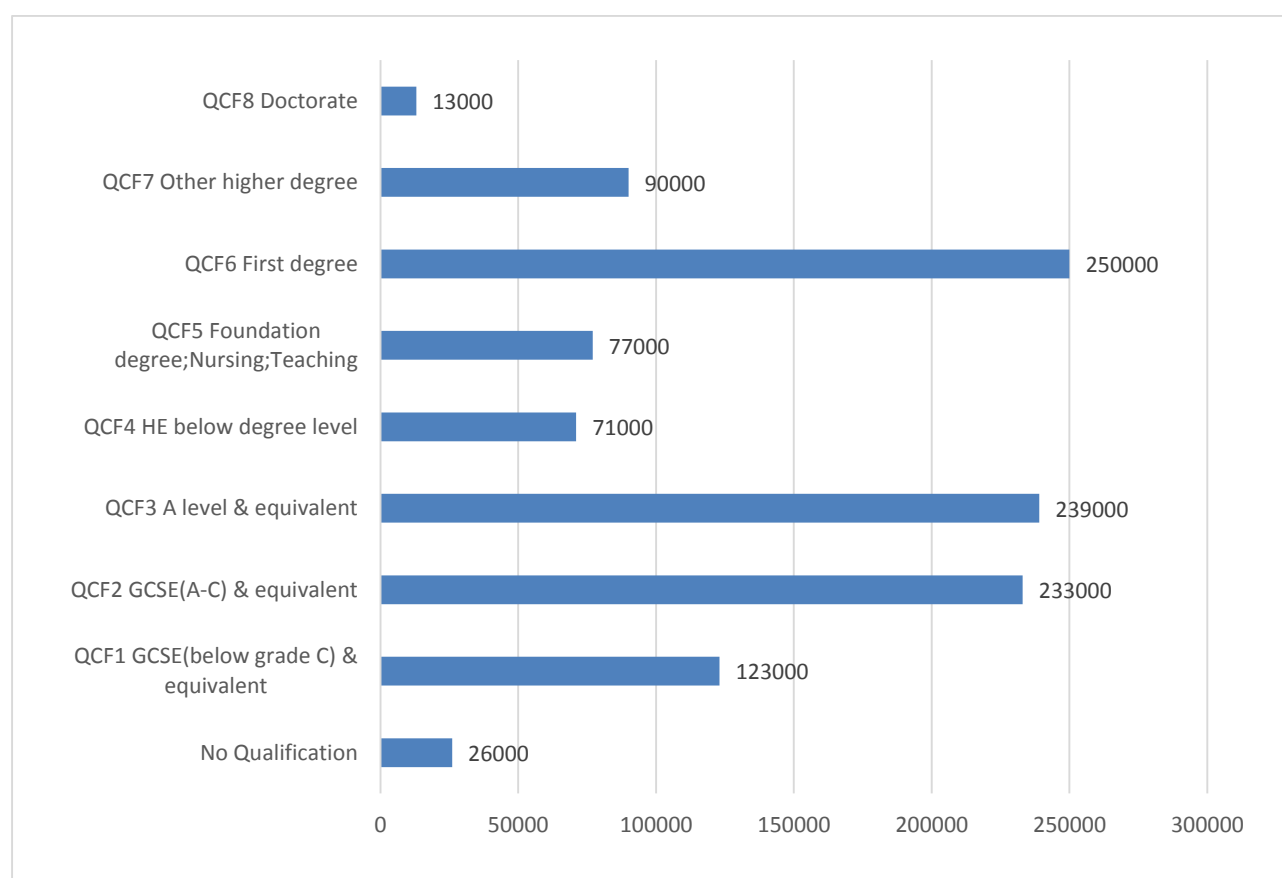
The chart reveals that while managerial and professional occupations feature heavily within the 'Top 10' occupations generating the greatest number of openings through replacement demand –four of the top five occupations traditionally do not require high level qualifications to access them: caring personal service occupations, elementary administration and service occupations, administrative occupations, sales occupations and business and public service associate professionals.

Figure 6 Projected change in replacement demand by occupation: 2014 to 2024



Reflecting, the occupational profile of replacement openings, most require qualifications at either first degree level (25,000) or A levels (23,900) or good GCSE passes (23,000). Only a relatively small share of replacement demand employment opportunities (13%, 149,000) would be suitable for a candidate with qualifications at ISCED level 0 to 2.

Figure 7 Replacement demand by qualification level, 2014 to 2024

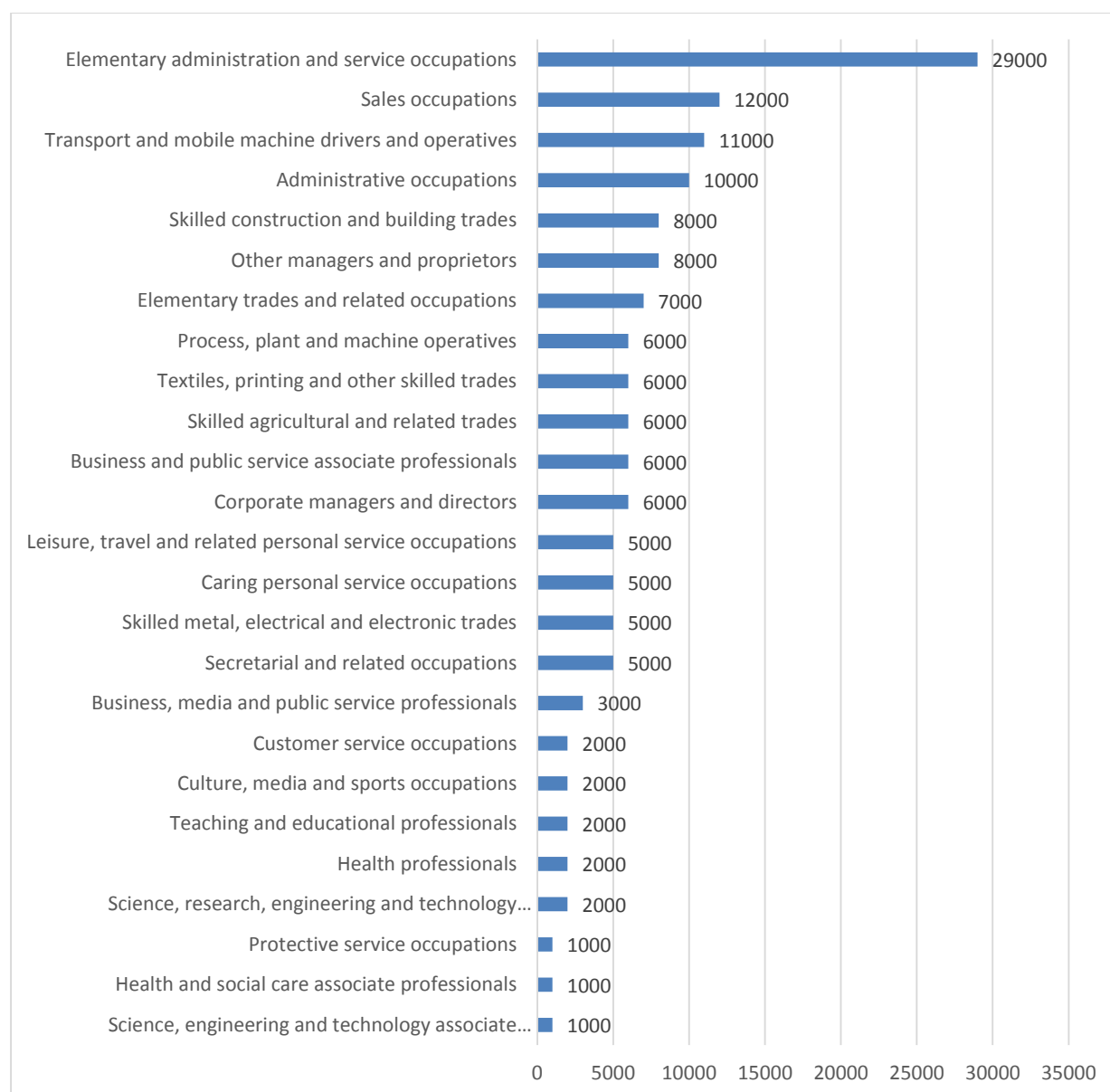


Working Futures Employment Projections 2014-2024, UKCES

Examining the replacement demand for occupations requiring no or low level qualifications reveals that these are most commonly elementary administration and service occupations (29,000). This category includes occupations such as postal workers and couriers, cleaners and domestics, parking enforcement officers, shelf fillers, hospital porters and kitchen and catering assistants, waiters and waitresses and bar staff. Many of these posts are typically part-time.

This is followed by sales occupations (e.g. sales and retail assistants, check-out operators and telephone salespersons, 12,000), transport and mobile machine drivers and operatives (e.g. HGV drivers, fork-lift truck drivers and air transport operatives, 11,000) and administrative occupations (e.g. bank clerks, sales administrators and office managers, 10,000).

Figure 8 Replacement demand for openings requiring ISCED 0 to 2 by occupation: 2014 to 2024



SECTION 3. SELECTED ECONOMIC SECTOR AND TARGET GROUP IN THE SW ENGLAND

3.1. Construction

The construction sector has been selected for particular focus for three main reasons. Firstly, it has been a significant source of economic growth over the last three years and £billion investment in a new nuclear build at Hinkley Point in Somerset suggests that this will continue. Secondly, and as a consequence of this, the sector is expected to generate 46,000 new employment opportunities over the next 10 years. In addition, a further 75,000 people will be required in the industry to replace those leaving. More than one-third of the Construction workforce in the region is currently aged 50 and over⁴. Finally, one-fifth (21%) of the region's construction workforce has low skills – this is a slightly higher share of low skilled workers than employed across all sectors. Ensuring that the sector attracts and retains sufficient numbers of suitably qualified workers will be a significant challenge underpinning the region's wider economic development objectives.

The 2015 UK Employer Survey⁵ concluded that:

“The Construction sector is commonly regarded as underpinning the economy, with its responsibilities for creating the infrastructure that allows businesses to grow (HM Government, 2013b). A doubling in the number of skill-shortage vacancies since 2013 therefore presents some cause for concern, especially considering that employment in the Construction sector has decreased since 2013, from 1.3m to 1.2m staff, and hence one would expect a ready supply of skilled labour. Skill-shortage vacancies are affecting the bottom line. Construction sector employers were the most likely to cite a loss of business or orders to competitors resulting from skill-shortage vacancies, this in turn has implications for growth potential in the wider economy.”

3.2. Construction workforce

According to the Working Futures projections, the construction sector employed almost 200,000 people across the South West of England in 2014. More than half (54%) of the region's construction workforce are employed in one of several skilled trades, most commonly

⁴ Annual Population Survey (Workplace) Analysis, January to December 2016.

⁵

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/525444/UKCESS_2015_Report_for_web_May_.pdf

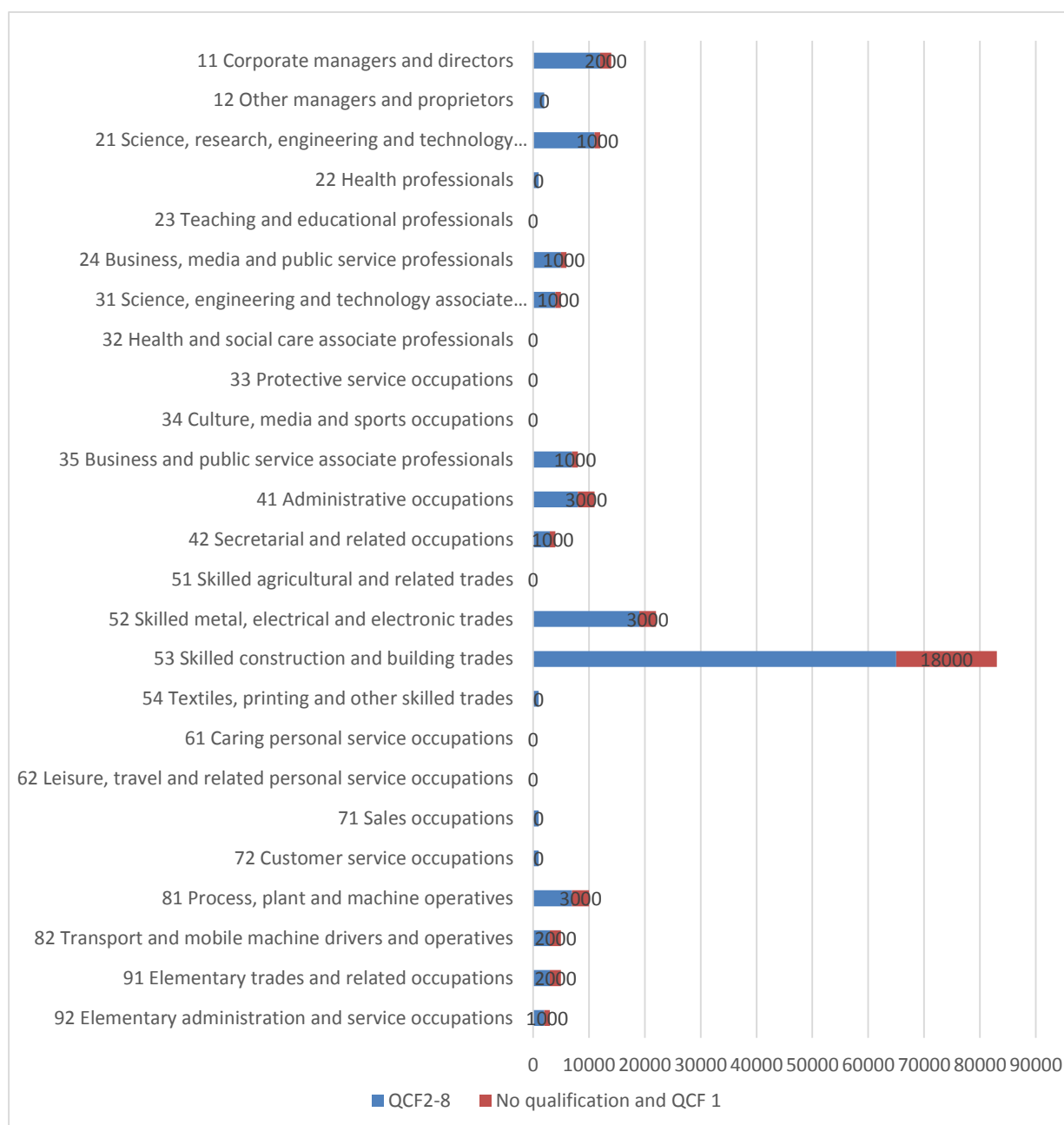
skilled construction and building trades (83,000). The Construction Skills Network's Industry Insights report for the South West suggests that the largest numbers of trades men and women are employed as:

- Wood trades and interior fit-out (27,600)
- Plumbing and HVAC trades (18,500)
- Electrical trades and installation (16,000)
- Building envelope specialists (12,200)
- Painters and decorators (11,100)
- Labourers not elsewhere classified (8,600)
- Bricklayers (7,700)

In addition to a wide range of construction trades, the sector employs process and project managers, civil engineers, architects, surveyors, non-construction professional and technical staff and other office-based staff.

More than one-fifth of the region's (21%) construction workforce (equivalent to 40,000 people) either has no qualifications or is qualified to QCF level 1 only. Most of these are employed as skilled construction and building trades (18,000) although a further 15,000 are employed as either skilled metal, electrical and electronic trades, administrative occupations and process, plant and machine operatives. (Figure 9)

Figure 9 Construction employment by occupation and qualification level in the South West of England: 2014 to 2024



Source: Working Futures, 2014-20124

3.3. Replacement demand of low skilled workers

Table 1 presents the main employment projection for the construction industry in the South West of England for 2014 to 2024. It shows that the sector is expected to generate 46,000 'new' jobs over the 10 year period and require a further 75,000 people to replace people

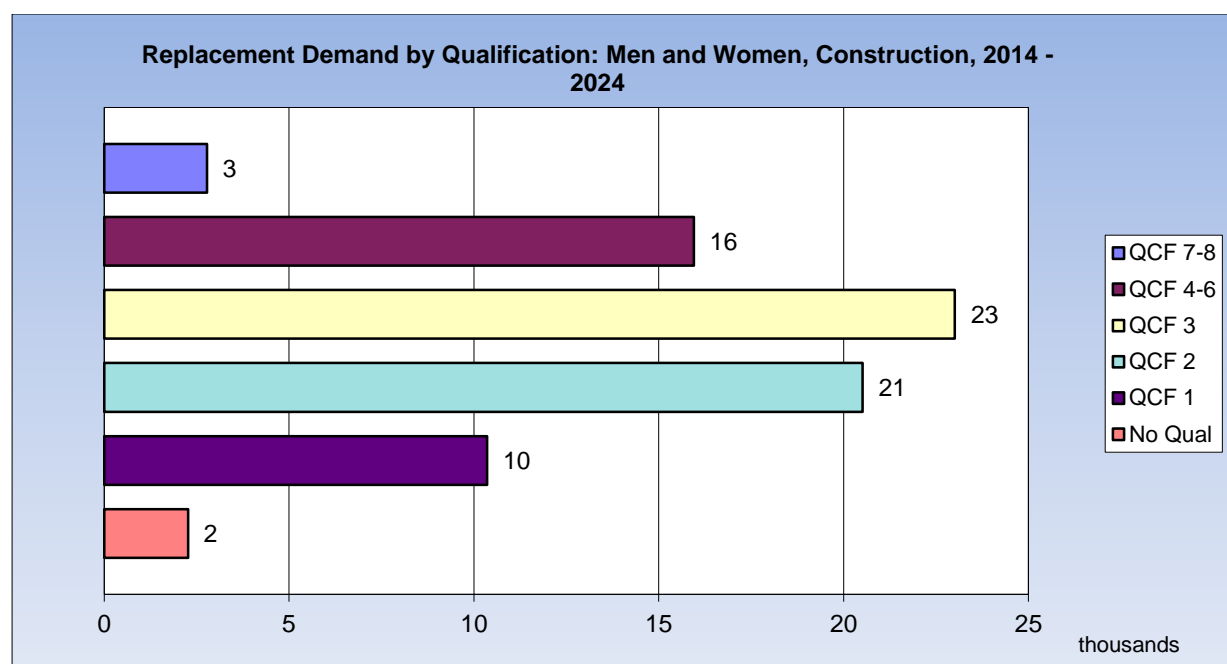
leaving the industry (mainly through retirement). This creates a 'new requirement for 121,000 workers.

Table 1 Construction employment projections for the South West of England: 2014 to 2024.

(Results in 000s)	Base year employment level	Expansion demand	Replacement demand	Net requirement
Corporate managers and directors	14	6	6	12
Other managers and proprietors	2	1	1	2
Science, research, engineering and technology professionals	12	4	4	8
Health professionals	1	0	0	1
Teaching and educational professionals	0	0	0	1
Business, media and public service professionals	6	2	3	5
Science, engineering and technology associate professionals	4	1	1	3
Health and social care associate professionals	0	0	0	0
Protective service occupations	0	0	0	0
Culture, media and sports occupations	0	0	0	0
Business and public service associate professionals	8	3	3	7
Administrative occupations	11	2	5	7
Secretarial and related occupations	4	-1	2	1
Skilled agricultural and related trades	1	1	1	1
Skilled metal, electrical and electronic trades	21	3	7	10
Skilled construction and building trades	83	17	30	47
Textiles, printing and other skilled trades	2	0	1	1
Caring personal service occupations	0	0	0	0
Leisure, travel and related personal service occupations	0	0	0	0
Sales occupations	2	0	1	1
Customer service occupations	2	1	1	1
Process, plant and machine operatives	11	1	3	4
Transport and mobile machine drivers and operatives	5	2	3	5
Elementary trades and related occupations	5	1	2	3
Elementary administration and service occupations	4	0	1	2
All occupations	197	46	75	121

Working Futures Employment Projections 2014-2024, UKCES

Focusing on replacement demand for low-skilled workers – the major themes of this study - suggests that around 12,000 of the 75,000 workers required to fill posts vacated by those leaving the industry will require qualifications at QCF level 1 or below - that is, one in six positions (16%). Rather, most of the demand will be at broadly intermediate level – QCF Level 2 (GCSE grades A to C and equivalent) and QCF Level 3 (A level and equivalent).



Most of the opportunities for low skilled workers will be for skilled construction and building trades (6,000) with a further 1,000 opportunities available for:

- Corporate managers and directors
- Administration occupations
- Skilled metal, electrical and electronic trades
- Process, plant and machine operatives
- Transport and mobile machine drivers and operatives
- Elementary administration and service occupations

SECTION 4. RESULTS OF INTERVIEWS

4.1. Interviews

In-depth interviews were carried out with:

- Head of Faculty, Construction and the Built Environment, Exeter College
- Partnership Manager, Jobcentre Plus for Somerset and Hinkley Point
- Employer engagement, Jobcentre Plus for Devon, Cornwall and Somerset
- Operations Director, Hinkley Point Training Agency
- Regional Manager, Prospects Services
- Employer Engagement Manager, Jobcentre Plus, Plymouth
- Group Community Engagement Manager, Midas Group Limited

4.2. Relevance of the sector for low skilled workers

4.2.1. *What kinds of jobs/opportunities are there for low-skilled people in this sector?*

The construction sector offers abundant employment opportunities for people with no or low level qualifications working in occupations such as ground workers, general operatives (including electricians' mates, trainee carpenters), steel and concrete frame fixers and concrete pourers.

According the National Careers Service⁶ website, labouring work could include:

- helping to prepare the site - putting up huts, unloading and storing building materials and setting up ladders and scaffolding.
- groundworking - marking out and digging shallow trenches for foundations and drainage
- formworking - putting up or dismantling the shuttering that holds setting concrete in place
- steel fixing - bending and fixing the bars used to reinforce concrete structure
- steel piling - fixing steel sheets together to form temporary retaining walls for excavation work
- concreting - layering and smoothing concrete for foundations, floors and beams
- road working - concreting, laying kerbs, paving and resurfacing.

With training, labourers could operate construction plant equipment like dumper trucks and excavators ideally gaining their trained operator and competent operator⁷ cards from the Construction Plant Competence Scheme.

⁶ <https://nationalcareersservice.direct.gov.uk/job-profiles/construction-labourer>

Holding one of these cards is not a legislative requirement. It is entirely up to the principal contractor or client whether workers are required to hold a card before they are allowed on site. Indeed on some sites, such as the nuclear facility at Hinkley Point, workers may be required to hold higher or additional qualifications to those required for conventional construction sites. This requirement is enshrined in contracts let along the supply chain, and reflects the need for operatives and trades who can meet the exacting requirements of the contract. It may however be possible to secure work in some trades, for example as a painter and decorator or 'builder's mate', without achieving any formal qualifications in private households or small building companies.

4.2.2. *What would be the entry requirements for these roles?*

To work for a principal contractor or major housebuilder, construction workers generally require a Construction Skills Certification Scheme (CSCS) card or equivalent⁸. These cards certify that the individual has passed the necessary professional and health and safety qualifications and is therefore a signal to employers that they can work competently and safely within their chosen trade. People with qualifications below Level 2 can obtain a "labourer" CSCS card upon completion of at least one entry level construction course in addition to passing the Construction Industry Training Board Health Safety and Environment test for operatives. This involves a low level health and safety competence test usually delivered via a touch screen which you have to prepare for. Many of MIDAS' recruits already have their CSCS card either gained on an unemployment or welfare project or from previous employment in the sector although they do train people who do not have it before joining the company.

If a CSCS card (or similar) is not required then often no formal qualifications are required to work as a general labourer although it is experience that is usually preferred.

4.2.3. *How easy is it to recruit people at this level?*

MIDAS invests in numerous out-reach activities in order to raise the profile of the company and the broader sector among school and college leavers, and identify potential recruits among the unemployed adult population. This is partly in response to a tightening labour market but also as a way to fulfil its Corporate Social Responsibilities (CSR) and lead contractor on large-scale regional construction projects.

The company works with Jobcentre Plus and the welfare to work providers, Working Links and Prospects, and engages with charities such as the Princes' Trust and Shekinah⁹ who support people with multiple barriers to work. One of the key ways that MIDAS contributes is by offering site experience and work trials which enable potential recruits to establish whether they are suited to a career in construction; this helps both MIDAS and their supply chain to

⁷ <http://www.constructionsupport.co.uk/cpcs-card/competent-operator/>

⁸ A number of schemes operate across the sector to certify the competencies of individuals working within it. The most common is the Construction Skills Certification Scheme (CSCS) which is run by the Construction Industry Training Board but others include the Highways Sector Schemes (NHSS) and the Construction Plant Competence Scheme (CPCS).

⁹ <https://www.shekinah.co.uk/> is a Devon based charity that provides opportunities for people in recovery or seeking recovery. This may include recovery from homelessness, drug and alcohol issues, offending behaviours or mental ill health.

attract candidates that are likely to stay within the industry and results in more efficient use of their training budgets. All these efforts mean that the company and its supply-chain generally have good access to potential candidates although it is not necessarily easy to recruit them since many adults engaged through this route have significant and often multiple barriers to work¹⁰. With support, however, they can access entry level positions.

4.2.4. What are the opportunities for progression beyond this?

Theoretically, there are extensive pathways to progress within the industry. For example, a labourer could specialise in any one of the construction 'trades', ultimately becoming a supervisor or site manager or running their own businesses depending on the acquisition of relevant qualifications. Generally, the work of 'gangs' of 15 or 20 construction workers are overseen by 2 or 3 supervisors.

Moreover, opportunities extend beyond traditional construction 'trades'. Higher level qualifications such as a Construction HNC or Civil Engineering HNC could lead to careers in construction or building services management, architecture, building management, surveying, estates management, civil engineering and building services engineering.

4.2.5. What training or further support would be needed to aid progression?

To be classified as a "skilled worker" individuals need to acquire a level 2 qualification in their chosen field and to gain an 'advanced craft' card, qualifications at level 3 are required (in addition to relevant health and safety qualifications). Generally, 'skilled worker' status is sufficient to demonstrate competence in trades such as bricklaying, joinery, painting & decorating and plastering but often a Level 3 qualification (or 'advanced craft' status) is preferred for trades such as plumbers and electricians. This partly reflects the need for a stronger grounding in 'academic' subjects such as maths, English and science in order to operate safely with water and electricity.

4.2.6. *Is this generally available and accessible locally?*

Construction training at Level 2 and above is generally available and accessible locally. For example, Exeter College has a purpose built construction centre in the City which delivers college-based training and apprenticeships in the main construction trades to Level 2. Progression at Level 3 is usually completed through the Apprenticeship route with opportunities locally in painting and decorating, plumbing and electrical installation.

In addition, to the traditional trades, the college also offers full time courses and Apprenticeships that could potentially lead to careers in architecture, building management and surveying, quantity surveying, estates management, civil engineering or building services engineering. This pathway starts with a Level 3 qualification in Construction and the Built Environment or advanced apprenticeships in civil engineering and construction technical and professional and courses in Civil Engineering (Level 4 and Level 5) and Construction (Level 4).

The offer at Level 2 and 3 is fairly typical of further education colleges locally although the provision of university level courses is perhaps less common.

4.2.7. *What training are you currently doing in this sector with low skilled people? (To help them access entry level jobs and progress beyond this?)*

Young people and adults wanting to acquire construction related qualifications within the Exeter travel to learn area can do so at a purpose-built construction facility operated by Exeter College. Those without any formal qualifications would usually complete a pre-qualification course before progressing to Level 1.

Typically, however, most start on a Level 1 course in one of a number of traditional construction trades, for example, in brickwork, carpentry, painting and decorating, plumbing and electrical installation. This provides an opportunity to work on their English and maths and get their 'hand skills' up to a decent level.

While most learners on construction-related college courses are young people, many are adults who have been working in the industry as labourers, often for many years after leaving school without achieving academically. Often these older learners need a technical qualification to obtain their CSCS card. Funding can be a problem for adult learners especially if they are not being sponsored by an employer. Those not already employed in the industry – for example, on a temporary 'experienced worker' card – can find it difficult to obtain the practical experience required in order to develop and demonstrate competence 'on the job'. A college course will provide them with the technical certificate evidencing their underpinning knowledge but they also need to assemble a portfolio of evidence and assessment demonstrating that they have applied practical competencies on-site.

The college also runs several part-time leisure courses for adults providing 'beginners' instruction in bricklaying, building with pallets, carpentry, creative wood work, DIY, plumbing and woodwork.

Unemployed people

Construction is targeted as a source of employment for unskilled unemployed people particularly in Plymouth where economic development partners have recognised the need to attract more people into the sector. Some job centres have provided short term training to unemployed people to help them get their CSCS cards and have used sector-based work academies to deliver a 6 week package incorporating pre-employment training and work experience; although it can be challenging arranging site experience. They have also run a steel fixing course with Hinkley Point Training Agency for young unemployed people. The course was resource intensive as the clients needed a lot of support and nurturing especially when they were away from home but all participants successfully moved into employment.

The Build Plymouth project has enlisted the support of some 'big players' such as Keir, MIDAS, MySpace, Plymouth Community Homes – but it is difficult finding sympathetic employers willing to work with this client group. Linking jobseekers, colleges and employers is important.

Long-term unemployed people are generally referred to a private provider for intensive support through the 'work programme', if PES interventions have been unsuccessful in getting the claimant back into work. The providers are paid once clients complete a specified period of work – the duration of which depends on the nature of the difficulties experienced by the client – and have flexibility over the nature of the support provided.

Prospects, the South West of England contractor for the work programme has supported long term unemployed people secure work in the construction industry although interventions are usually aimed, at least in the early stages, in helping them overcome some fairly intractable barriers to work such as physical and/or mental health issues, family issues, literacy or numeracy issues, drug or alcohol abuse and insecure housing. This initial support would be delivered through a network of specialist partners and when the client was ready, they would be supported to access 'mainstream' education and employment opportunities.

Prospects has worked with Cornwall College and the Kier Housing project group to help work programme customers try different trades in a supported environment. Some went on to obtain their CSCS card, allowing them to secure work as general labourers whilst continuing to receive help with their health problems and attend college on a part time basis. The organisation has also delivered similar programmes in Devon, and has worked with Magnum in Dorset. It lives to link up with housing associations and/or buildings in areas where they are opportunities and vacancies.

Careers advice and guidance

The National Careers Service provides information and advice on employment and training options to young people and adults of all ages. The local provider, Prospects, runs an initiative called the 'Inspiration Agenda' which brokers relationships between schools, colleges and employers to create links between industry and educational institutions. The focus is to inspire young people to think about their future careers. Prospects' work in construction has included:

- Industry Insight, talks about a sector or industry
- Routes into work, talks about Apprenticeships, University or School Leaver programmes
- Work place visits, young people visit and meet real people in real jobs at work
- Employers attending Career Fairs
- Mock Interviews delivered by employers

More needs to be done to promote construction as a career since many jobseekers see it as a short term, “stop gap”. The emphasis needs to be on: promoting career development within the sector, improving the quality of careers information advice and guidance; and in particular, challenging negative perception of the sector among parents and schools.

4.2.8. *Where does the money come from to provide the training?*

Young people are supported by Government to achieve their first Level 3 qualification so generally, the pathway to skilled employed within the construction sector is relatively well funded. For example, government will pay the full cost of apprenticeship training for people aged between 16 and 18.

However, funding for the up or re-skilling of adults is more problematic *unless they are unemployed*. An employer may be expected to the training costs of an apprentice who is over 19 and apprentices aged 24 or over may be expected to contribute towards the cost of their training. The amount an employer pays will depend on whether they pay an Apprenticeship Levy¹¹. Advanced Learner Loans are available to help adults cover the cost of apprenticeship training.

Many construction firms pay a training levy to the Construction Industry Training Board¹², the majority of which is returned to the industry in the form of grants and support for training. This is paid to employers rather than employers is not necessarily granted on a full cost recovery basis. Payment of the grant means that some employers are reluctant to invest any further funds in staff training and development. Furthermore, as self-employment is common in the sector it can be difficult for adults who do not have an employer to access training.

HPTA has submitted a bid for additional funding to the Skills Funding Agency but the condition of the award is that the funding is used to support the training of unemployed people. Unemployment in the local area is very low: and funds are needed to support those who are under-employed either within or outside the industry. The project is seeking flexibility in the funding since it can be a problem getting contractors to pay for unqualified people to gain the necessary qualifications to grant them access to the HPC site. Upskilling workers is “one of the biggest issues they” face and in response are recruiting all over the world.

Apprenticeships are perceived to be the best (if only) ‘game in town’ currently for developing the skills of the workforce with some employers using government funding ‘creatively’ to finance the training of existing staff. MIDAS, for example, has around 15 apprentices across the business training in technical areas as well as trades. Apprenticeships were useful in the sector but it is not possible to ‘flood’ construction site with apprentices as they are only allowed

¹¹ <https://www.gov.uk/take-on-an-apprentice/get-funding>

¹² <https://www.citb.co.uk/levy/>

access under controlled circumstances. Long commutes can also deter construction apprentices.

While the sector is training more adult apprentices than hitherto, the college felt that there was scope to train more adults for work in the sector in order to combat existing and expected labour and skills shortages. The physical nature of construction work means that 'early' retirement is fairly common and it is unclear how "Brexit" will affect the numbers of migrants coming to the UK to work. The sector has benefited from a good supply of workers from Eastern Europe, particularly Poland although this workforce also has training needs. It is clear that the industry is not going to meet its requirement just from school leavers – there is a need to upskill the existing construction workforce, provide a mechanism for people working in related occupations in other sectors (for example, drivers or welders) to make the transition to construction and attract those into the industry in non-related fields.

The challenge is moving away from a culture of training and education being 'free' (or state-funded). This is a particular challenge in the construction sector as companies who already pay the construction training levy are generally unwilling to pay more. The structure of the industry can make funding difficult with predominately micro companies and self-employed people. There are examples of companies – Tier 1 contractors – who only employ project directors – everyone else is contracted. By contrast, another Tier 1 company, Laing O'Rourke has chosen to directly employ its staff and by doing so has a stable, loyal and highly trained workforce. The company has a reputation for quality ('do it right first time') and safety with a culture of teamwork, progression and training.

Ex-services personnel are often entitled to 'learning credits' funded by the Ministry of Defence to facilitate their transition to civilian life; there are also examples of workers funding training themselves to allow them to progress within the industry.

Funding is more flexible for the unemployed with Jobcentre Plus and Work Programme providers given more flexibility from government about the interventions they provide to support people back into work.

4.3. Participation, Engagement and Recruitment

4.3.1. What training do employers offer low-skilled workers

The training MIDAS offers to low skilled workers depends on individuals' aspirations. Once they are in employment and have had role specific training – that might be manual handling, CSCS card, asbestos awareness and abrasive wheels training, many are 'happy with their lot' and will not seek further advancement. Their subsequent training will tend to be renewals to keep their qualifications up-to-date. But if someone joins and wants to progress from trainee site manager through the ranks, they will be supported to progress as long as their work ethic and attitude fits the company. They are contractually obliged to deliver employment and skills on 'a lot' of their projects and have a responsibility to support their supply chain (who deliver the trades packages for them).

4.3.2. Have you experienced any issues with the 'drop out' rates of low skilled people on these courses?

The college reported that only about 5% of students who start a Level 2 course do not proceed beyond the first term although it has identified a problem with early leavers on its electrical installation course.

Drop out is not a big issue within the work programme as the initiative is mandatory to some and tailored around the specific needs of the individuals.

4.3.3. If so, what are the issues?

College drop outs were often simply because it was clear that the young person, "didn't have it in them". Beyond this, students drop out for a number of reasons including moving out of the area. Many of the younger boys tend to mature rapidly over the summer when they are 17 or 18 years old when they realise that they have to acquire a trade in order to become economically independent. After that point, they are easier to engage and are more committed to their learning.

The electrical installation course also has a relatively high level of drop out partly because it is a long course but it may be that young people are not receiving the right advice and guidance before starting. Some start at age 16 when they might not be clear about their future career goals and have a change of heart after being on the course for 18 months. If it was a shorter course then they might be tempted to stick it out until the end.

Occasionally work programme participants will leave the programme following a work capability assessment which deems the nature and/or severity of their illness or disability a substantial barrier to work and are therefore not expected to look for work in order to receive out of work benefits.

4.3.4. What do you offer to support low-skilled people complete their training?

The interviews highlighted a couple of instance where providers had modified the delivery of their courses to improve participation and engagement.

Firstly, in response to high drop-out rates, Exeter College no longer recruits young people directly onto a Level 3 qualification but starts them on a Level 2 which is 'topped up' for another year to achieve Level 3. The young learners receive a good deal of support to achieve at least a Level 1 in maths and English (equivalent to a grade D/E) as progression to Level 2 often depend upon achieving this. Although, an even higher level, a Level 2 is needed in English and maths to progress to the Level 2 qualifications in electrical installation, plumbing and the built environment. The requirement for Level 2 can hinder some from progressing particularly if they are dyslexic.

Those that have very low qualifications start on a pre-learning programme to get them ready for formal education.

The steel fixing course for young unemployed people was resource intensive as clients needed a lot of nurturing and support especially when attending training away from home.

Demand for labour within the sector is closely related to the general health of the economy with few apprentices being taken on during times of recession and some apprenticeship places ending abruptly when construction projects are in short supply. This can create skills shortages when the sector eventually recovers especially as many experienced construction workers will have retired during the interim.

4.3.5. What would you like to do, should resources permit?

Job centre plus would like to do more with families, schools and employers to address the largely negative perception of the sector among young peoples' informal advisers. They would also like to explore how they could support more disabled people work in the sector since this group consists of the majority of people not in work.

4.3.6. How do you motivate low skilled people to complete their training?

Recognising that work was part of the 'prescription' for helping people overcoming some of their psychological and physical difficulties, the work programme has reoriented its delivery. Rather than receiving a programme of support designed to help them overcome their difficulties at the start of the programme and then go to work, clients are found work and supported in working through their health or social issues whilst in work.

Work programme clients tend to remain engaged as long as they feel they are progressing and that there are (job) opportunities open to them. As many clients are voluntary – that is, they are not mandated onto the programme as a condition for receiving benefits – the environment has to be welcoming and there has to be clear benefit to attending. In the short term, this is not always about a job but could be advice about healthy eating or exercise classes.

4.3.7. What are the current difficulties/barriers to achieving a higher participation rate from people belonging to the target group?

Resourcing is probably the most significant barrier insofar as learners with low skills often need more support and encouragement than other learners. Budgets with further education are fairly tightly stretched at the moment so colleges can struggle to fund the mentors and tutors needed to support this group.

4.4. Skills gaps and barriers

4.4.1. What academic competences/skills do people need to work in this sector, in the kind of roles that low-skilled people are employed in?

The academic requirement for entry level jobs in this sector is low although people need to be aware of the dangers inherent on a construction site and therefore need to have the requisite health and safety training before they go onsite. This can make it difficult for people to get site experience when they are starting out or considering a career in construction.

It is possible to obtain a CSCS card for labouring by completing rudimentary training in health and safety and site awareness. College courses will take students onto Level 1 construction courses with low or no pre-requisite qualifications although they will need to achieve a low pass in maths and English to progress to training in Level 2. Achieving the necessary levels of competency in English and maths can be a barrier to some especially if they have poor previous experience of classroom based learning – this can prevent people from progressing within their chosen field.

Generally, academic expectations were lower for brickwork, painting & decorating, carpentry and plastering than plumbing and electrical work with the training for the latter having a science-based module within the framework. Unqualified workers cannot enter the Hinkley Point C site.

4.4.2. What are the main gaps in employability (transversal -e.g. non-job specific skills- and personal skills) in the target group? (Thinking solely about employability skills – that is not technical or job specific skills – but personal skills – what skills are needed for entry level jobs in this industry).

The college identified a lack of practical and technical skills among its young recruits even among those who had achieved reasonable standards academically. Few schools offer practical craft-related courses now so pupils do not have the opportunity to work with common tools. Often they need to start at a Level 1 in college even if they have achieved maths and English at Level 2 because they have not developed the practical skills they need to progress to that level. A reasonable standard in English comprehension is required in order to keep workers safe on site. So they need to be able to read on-site posters, for example, highlighting “dangers of the day”, for example if a crane is in operation that day or there is going to be a dig in a particular area.

Behaviour and attitude is as, if not more, important than skills. It is crucial that construction workers have a strong work ethic, that is, that they turn up on time, follow instructions and are hard working. They must be prepared to work hard and be reliable – construction workers need to work in all weathers. Some of the work programme clients need a lot of support in order to develop the right attitude and mentality for construction work. Many need help with maths and English although usually their English is better than their maths.

On the Hinkley Point C construction site, team-working is particularly important, as is confidence. Workers need to have the confidence to speak up if they observe unsafe working practices and feel confident about reporting near misses. This is crucial in ensuring safety on-site. Conventional construction sites may be less stringent in reporting near misses. Physical fitness levels can also be a problem among young entrants especially if schools have scaled back on physical education sessions during the last two terms in Year 6 in order to concentrate on exam preparation. They run a ‘Fit to Work’ programme to help young people to improve their physical fitness.

4.4.3. Are you generally able to find these skills within the low-qualified workforce?

As unemployment in the area is low, employers can struggle to recruit and often over-estimate how many young people are entering the labour market each year. Adult 'career changers' or the unemployed are therefore also important potential candidates. MIDAS also works with the Transition Career Partnership¹³ who support people who are due to or have left the military in finding civilian work. They usually join the company as a trainee site manager and MIDAS provides them with the training to become qualified site managers. Often this training is paid for using "learning credits" funded by the Ministry of Defence to facilitate the redeployment of ex-services personnel.

There is a sector shortage of trades with particularly shortages of specialist categories of plant operator; for example loco drivers for service tunnels and tunnel boring machine operators.

The average age of the construction worker is high and while there are apprenticeship opportunities around, the pay of apprentices is low compared to that of other low skilled occupations, for example in retail and hospitality.

4.4.4. What are the main gaps in academic skills and qualifications of this group?

The main gaps are in craft trades so mainly at Level 2 and Level 3.

4.4.5. Are there any specific qualifications relevant to this sector that are hard to find among the low skilled people?

The HPTA has identified a need for around 2,000 scaffolders over the duration of the project. The organisation is working to source additional training places on scaffolding courses to meet its need, hoping to source as many workers locally as it can. The complexity of the project, however, requires scaffolders who have acquired an extended, 30 month qualification which means it can be difficult to source workers of the right calibre in sufficient numbers. Increasing the supply of trained scaffolders at any level however will help to 'back fill' vacancies created by employees securing work on the Hinkley Point project. The HPTA is sensitive to the displacement effect of Hinkley Point and is working to create a legacy of construction skills in the region.

4.4.6. What skills will be necessary in the medium future (5-10 years)?

Demand for the skills needed to maintain and repair listed buildings is likely to fall. This will include cobble work, sash windows and traditional plastering. Most of the demand will be for specialist skills for residential buildings.

¹³ <https://www.ctp.org.uk/>

Use of modular buildings is increasing. For example, Willmott Dixon has produced a blueprint for modular schools which is being used across the UK. These buildings have the advantage of being very quick to construct: one local school was constructed in this way in just 9 months. However, the approach is not necessarily new – McDonald's has been doing it successfully for many years.

4.5. Outcomes and progression into work and/or further training

4.5.1. Do you monitor job outcomes (if they get into employment after the course) and if so, how?

Both the college and the work programme provider monitor outcomes closely. For the latter, evidencing job outcomes is crucial because they are paid on results. They keep in touch with their clients in order to offer ongoing support and track their employment status at 13 weeks and 6 months.

4.6. Technological change and automation

4.6.1. Do you think that many parts, or all, of the low-skilled jobs in these sectors will be subject to automation in the next 10-15 years? (PROMPTS for supplementary information):

Automation is having an impact on the skills needed in the sector although as most of the entry level jobs are mainly manual, it is hard to imagine, "robots replacing bricklayers yet". Rather, technological advances will result in new methods of production and new materials.

For example, off-site manufacturing is increasing with modular buildings becoming more common. Some off-site manufacture has been happening for many years (e.g. roof trusses) but others are relatively new (e.g. installation of 'bathroom pods' in student accommodation). This will move the demand for labour and skills to the manufacturing sector and shift demand for skills onsite to assemblers and workers with skills in logistics, project management and scheduling.

While still in relative infancy, there is potential for 3D printing to change the way buildings are constructed. Loughborough University have built a house out of concrete using this technology.

The UK is also 'miles behind' countries such as Germany, Sweden and Canada in the design and construction of environmentally friendly and energy efficient homes. Some emerging technologies require 'blended' trades: who should fit solar panels? An electrician, roofer or plumber?

The materials being used in construction are changing. Whilst bricks continue to be the main source for housebuilding, many commercial buildings – at least those with architectural pedigree – are built using materials such as glass and steel. In this sector, somethings architecture and design pushing the technical boundaries of what is possible – the technology

to build the Shard in London, famously, did not exist when the design for the building was first conceived and elevators were re-engineered for the very tall buildings in Dubai.

Government regulation can also influence what skills are needed within the industry. For example, Construction Design and Management regulations require that architects and their clients consider how their instruction will be built, maintained and eventually, demolished, safely. Building Information Modelling ensures that components and materials are recorded.

Labour specialisation has increased within the sector over the last 10 years. For example, within carpentry it is common for new recruits to specialise on first or second fix or roofing and some joinery shops will only produce staircases or windows. In one sense this is efficient - as tradesmen become very proficient and quick at completing repetitive tasks, for example, at hanging doors on a new housing estate. However, increased specialisation can lead to inefficiencies when several people are needed to complete a fairly rudimentary task such as moving a light fitting – electrician to move the fitting, a plasterer to repair the hole in the ceiling and painter and decorator to repaint the ceiling.

Technological advances have and will continue to change the way training is delivered across the sector. Already, asbestos awareness training is delivered online and CSCS training materials are available on a DVD. This means learners can access learning at a time and location that is convenient to them. Looking further ahead, the Construction Industry Training Board have published a report exploring the potential for Immersive Learning, that is, the use of digital technologies such as virtual and augmented reality to revolutionise training delivery and transform the perception of the construction sector to young people and investors¹⁴.

4.7. Good practice

4.7.1. Are you aware of any established good practices which have helped achieve the involvement of the target group within the sector, and if so, which one do you think has given the best results?

One interviewee spoke enthusiastically about the need for employers to engage with the education supply chain to ensure that it provided the skills and knowledge it needed. He reasoned that most would not hesitate to complain if a concrete powder supplier provided the wrong material so why not talk to their local school or college? Another interviewee felt that by consulting with big housebuilders – who he felt did not have the best knowledge about “what construction workers do and the skills they need”, the Government has unnecessarily delayed the review of most construction related Apprenticeship frameworks. Planning has its challenges however as business was project-based and often short-term.

Interviewees also talked about the importance of reaching young people in schools to raise the profile of construction careers. The college was thinking of working with more primary schools as it was felt that many young people had formed fairly secure ideas about what kind of work they wanted to do by the time they reached secondary school. There are also examples of

¹⁴ https://www.citb.co.uk/documents/research/t1438-rr-citb-a_new_reality_report.pdf

construction being used as a vehicle to teach subjects (such as maths) and give pupils an opportunity to work in teams. The college has run practical sessions in schools in the past to engage with vocationally-minded pupils and provide them with an opportunity to succeed doing something non-academic but schools no longer have the funding to do this.

In addition, there are projects locally, designed to promote the sector and link local people with jobs and apprenticeships, training and career opportunities within construction. Building Plymouth¹⁵ is a multi-agency initiative, set up as a 'call to action' to engage local stakeholders to work together to create practical solutions to overcome the skills shortages and skills gaps facing the local construction and built environment sector. More specifically the project is:

- helps to increase the local availability of construction skills
- connect more people to employers offering work placements, training, jobs and apprenticeship opportunities
- enhance the image of the sector
- increase local awareness of careers in the construction and built environment sector

Building Plymouth runs a job shop to help connect local jobseekers to jobs.

The Cornwall College and the Kier Housing project was effective in attracting low skilled people into the sector. Trainees were given 2 weeks to acquire their CSCS card and then spent 6 weeks on site sampling different trades. Trainees and employers liked it because it looked good on a CV. The key seems to be partnership working – between employers, the job centre, training providers and other social partners such as the local authority. HPTA also uses its extensive networks to help people who are unsuccessful in securing work onsite to find employment in other areas.

In addition, the Hinkley Point Training Agency is a network of colleges and training organisations offering education, skills training and enrichment solutions to the Hinkley Point C Project¹⁶ and the region it affects. It acts as the 'clearing house' between project contractors and their supply chains and regional training organisations and job seekers; identifying what skills are needed and developing solutions to help as many local people and employers secure the employment and training they need; commissioning new training provision if needed. This includes a database of relevant training opportunities¹⁷. As part of this project, EDF Energy have committed over £11m to support the provision of employment and skills for local people.

MIDAS believe offering work experience opportunities and being open to new ideas is key to attracting new people to the industry. A 'high percentage' of people who come to the company for work experience of various durations end up working for the company at some stage, but not necessarily immediately. The company also participates in the national 'Open Doors'¹⁸ initiative, opening up designated sites to the public to enable them to 'look behind the

¹⁵<https://www.plymouth.gov.uk/childrenandfamilies/schoolseducationskillsandemployability/skillsandemployability/buildingplymouth>

¹⁶ The Hinkley Point C nuclear power plant is a multi-billion pound investment project that will provide secure, affordable, low-carbon energy to around five million homes in the UK and create thousands of job opportunities in Somerset and beyond. Over the construction period, 25,000 new employment opportunities will be created, and once built, it is estimated that 900 people will work at the site during its 60 years of operation.

¹⁷ <https://www.hinkleytraining.co.uk/training/>

¹⁸ <http://opendoors.construction/>

hoardings' and speak to people who work in the industry. Construction is a unique environment and work experience is helpful in supporting individuals establish whether it is the right industry for them.

Shekinah has got a construction skills centre in Plymouth where people with multiple barriers to work are supported with employability and limited construction-based skills in a workshop environment to enable them to take up opportunities within the construction sector.

Candidates are supported in that environment until they are ready to make the transition to work experience on a real site with MIDAS. They are mentored and buddied up, on-site. This joined-up, partnership approach can and often does, lead to employment with the company itself or within its supply-chain.

MIDAS (through mi-Space) have also established a "genuine partnership" with a Shekinah, Devon and Cornwall Housing Association (DCH) and Building Plymouth (Plymouth City Council), delivering the "Build + thrive" initiative¹⁹ which supports young people enter entry level positions through a process of training, volunteering, housing and employment. The aim of the programme is to provide training and employment for these young people, at the end of the scheme they will have the chance to move into the refurbished shared property that they would have worked on during the project or to alternative young people's DCH accommodation. The project focuses on the strengths of the young people who are taking part in it and works with the young people to enhance their existing strengths and empower them to make changes for themselves. The young people on the programme will be committed to pursuing a career that's related to construction as DCH will provide them with an accredited training provision in construction skills. The young people are supported by a coach who helps by identifying what is working well or not so well for them and how they can approach employment, education or training.

¹⁹ <https://www.vercida.com/uk/articles/dchs-build-thrive-programme-helps-young-customers-learn-new-skills>

SECTION 5. SOME CONCLUSIONS ABOUT THE IDENTIFIED OPPORTUNITIES

5.1 Relevance

There is no doubt that this is an ideal time to be working in this area. The region is experiencing a real need for more construction workers with both an ageing workforce (replacement demand is high) and a growth in construction in both civil engineering and house building. The former including a particularly large construction project – Hinkley Nuclear Power Station which will result in a major movement of workers to the site from elsewhere in the region.

The problem has been recognised by both regional (Local Enterprise Partnerships) and local (Local Government) and both are seeking very similar ways to tackle the problem (see good practices).

Low skilled workers tend to be labourers. With training, labourers could operate construction plant equipment like dumper trucks and excavators ideally gaining their trained operator and competent operator cards from the Construction Plant Competence Scheme. People with qualifications below Level 2 can obtain a “labourer” CSCS card upon completion of at least one entry level construction course in addition to passing the Construction Industry Training Board Health Safety and Environment test for operatives.

The sector is also seeing the result of industrialisation and digitalisation with subsequent impacts on a number of existing job roles and a movement towards greater specialisation. With much being built off-site and just erected on-site the need for traditional building skills is somewhat diminished (apart from in repairs and general building work).

The UK perceives itself to be ‘miles behind’ countries such as Germany, Sweden and Canada in the design and construction of environmentally friendly and energy efficient homes. Some emerging technologies require ‘blended’ trades: who should fit solar panels? An electrician, roofer or plumber?

The college identified a lack of practical and technical skills among its young recruits even among those who had achieved reasonable standards academically. Few schools offer practical craft-related courses now so pupils do not have the opportunity to work with common tools. Often they need to start at a Level 1 in college even if they have achieved maths and English at Level 2 because they have not developed the practical skills they need to progress to that level. A reasonable standard in English comprehension is required in order to keep workers safe on site. So they need to be able to read on-site posters, for example, highlighting “dangers of the day”, for example if a crane is in operation that day or there is going to be a dig in a particular area.

Behaviour and attitude is as, if not more, important than skills. It is crucial that construction workers have a strong work ethic, that is, that they turn up on time, follow instructions and are hard working. They must be prepared to work hard and be reliable – construction workers

need to work in all weathers. Some of the work programme clients need a lot of support in order to develop the right attitude and mentality for construction work. Many need help with maths and English although usually their English is better than their maths.

Generally, 'skilled worker' status is sufficient to demonstrate competence in trades such as bricklaying, joinery, painting & decorating and plastering but often a Level 3 qualification (or 'advanced craft' status) is preferred for trades such as plumbers and electricians. This partly reflects the need for a stronger grounding in 'academic' subjects such as maths, English and science in order to operate safely with water and electricity.

On the Hinkley Point C construction site, team-working is particularly important, as is confidence.

5.2 Gaps and barriers

Problems are caused by the rapid expansion of labour demand and the ageing of the workforce however there are a number of significant barriers to any practices attempting to alleviate the problems. These can be summarised as:

1. The negative perception of the sector within the minds of some people in education and more widely who do not recognise the very significant opportunities for rewarding careers that exist and will exist in time. More needs to be done to promote construction as a career since many jobseekers see it as a short term, "stop gap". The emphasis needs to be on: promoting career development within the sector, improving the quality of careers information advice and guidance; and in particular, challenging negative perception of the sector among parents and schools.
2. Greater number would be willing to enter the profession but larger and better equipped facilities would be welcome.
3. The main gaps are in craft trades so mainly at Level 2 and Level 3.
4. If you enter the sector with low skill levels you are likely to only find work as a labourer and even attempting to enter apprenticeship courses and general courses requires a qualification or two – such as GCSE maths and English language. Places on apprenticeships for low skilled young people tend therefore to include academic input until a high enough standard is reached.
5. Funding can be a problem for adult learners especially if they are not being sponsored by an employer. Those not already employed in the industry – for example, on a temporary 'experienced worker' card – can find it difficult to obtain the practical experience required in order to develop and demonstrate competence 'on the job'. A college course will provide them with the technical certificate evidencing their underpinning knowledge but they also need to assemble a portfolio of evidence and assessment demonstrating that they have applied practical competencies on-site.
6. An issue is that with specialisation workers may find it difficult to move between trades and jobs and the generic skill set of an experienced builder may slowly disappear.
7. Most training is by small training providers and the companies they work with may lack sufficient staff to enable training courses in new areas to be laid on cost effectively.

5.3 Good practices

There are a small number of good practices that need to be mentioned:

- The sector and its training partners (normally Colleges delivering apprenticeships) take part in visits to schools to improve knowledge of the sector and the roles available within it.
- The Building Plymouth initiative where the local authority has provided a link person between trainers and education providers to try and get greater use of local apprenticeships and local businesses within large scale building programmes is successful and is being copied elsewhere in the region.
- The sector training organisation – the CITB – maintain via a levy a very positive role in supporting employers needs and providing information including forecasting the numbers of skills in sub sectors and roles that will be needed – giving policymakers and trainers an opportunity to understand the needs for providing the right number of skilled people to fill the posts anticipated. Employers also get to benefit from understanding their own role and how other work will impact on the availability of labour.
- MIDAS invests in numerous out-reach activities in order to raise the profile of the company and the broader sector among school and college leavers, and identify potential recruits among the unemployed adult population. This is partly in response to a tightening labour market but also as a way to fulfil its Corporate Social Responsibilities (CSR) and lead contractor on large-scale regional construction projects. The company works with Jobcentre Plus and the welfare to work providers, Working Links and Prospects, and engages with charities such as the Princes' Trust and Shekinah²⁰ who support people with multiple barriers to work. One of the key ways that MIDAS contributes is by offering site experience and work trials which enable potential recruits to establish whether they are suited to a career in construction; this helps both MIDAS and their supply chain to attract candidates that are likely to stay within the industry and results in more efficient use of their training budgets. All these efforts mean that the company and its supply-chain generally have good access to potential candidates although it is not necessarily easy to recruit them since many adults engaged through this route have significant and often multiple barriers to work²¹. With support, however, they can access entry level positions.

5.4 Recommendations

We recommend that within our region we work to support the new initiatives paralleling the developments with Build Plymouth. This will entail working closely with the 'triple helix' of education, local government/policy and education/training providers.

We will seek to understand what is working and why and to write up the emerging work as good practice. As a model it appears to be reproducible elsewhere and therefore should find its way into the final project Toolkit.

We will seek to keep all of the people interviewed to date involved via the events and meetings we plan – and all have volunteered already to take part.

²⁰ <https://www.shekinah.co.uk/> is a Devon based charity that provides opportunities for people in recovery or seeking recovery. This may include recovery from homelessness, drug and alcohol issues, offending behaviours or mental ill health.

The roadmap for the next phase will be:

- Meet with Local Authorities in Devon to explore how we add value and research what is needed
- Identify stakeholders from the triple Helix
- Share our report and learning to date
- Organise a series of either sub-regional events in different locations or on different themes
- Make recommendations locally and regionally for where the work should progress to best support low skilled individuals into work within the sector
- Compile notes and details/practices from these to inform the Toolkit (which will include a number of elements already identified within our work).

ANNEX – Evidence

Here we include an aide memoir from the interviews and details of three particular interviews. Others are available via electronic transcript.

Aide memoir

OBJECTIVE: to get relevant information from key agents about the relevance of the opportunities detected on the selected sectors and occupations to low- skilled labour force and the viability of upskilling them focus on obstacles and best practices.

QUESTIONS FOR TRAINING CENTERS

The sector and target group

1. How relevant is the chosen sector for this target group?
2. What training are you currently doing in this sector with low skilled people?
3. Where does the money come from to provide the training?

Participation, Engagement and Recruitment

4. How do you motivate low skilled people to complete their training?
5. What are the current difficulties/barriers to achieving a higher participation rate from people belonging to the target group?

Skills gaps and barriers

6. What are the main gaps in employability (transversal and personal skills) in the target group?
7. What are the main gaps in academic skills and qualifications?
8. What academic competences/skills do people need to work in this sector and in the kind of roles that low-skilled people are employed in?
9. What skills will be necessary in the near future (5-10 yrs)?

Outcomes and progression into work and/or further training

10. Do you monitor job outcomes (if they get into employment after the course) and if so, how?

Good practice and automation

11. Are you aware of any established good practices which have helped achieve the involvement of the target group within the sector, and if so, which one do you think has given the best results?
12. Do you think that many parts, or all, of the low-skilled jobs in these sectors will be subject to automation in the next 10-15 years?
(PROMPTS for supplementary information):
 - a. Which jobs or activities specifically would you foresee as being subject to automation in the next 10-15 years?
 - b. Which of these specifically can impact your training centre/organisation the most?
13. Do you think automation will impact the way training will be delivered to low-skilled people in the medium future (5-10 years)?

Follow-on

14. Are you willing to join a Steering Group and/or attend a Workshop to help with the remaining year of our work?

QUESTIONS FOR PUBLIC SERVICES

The sector and target group

1. How relevant is the chosen sector for this target group?
2. How would you define low skilled workers and what are the problems that they face in finding and maintaining employment?

Skills gaps and barriers

3. What are the current difficulties/barriers to achieving a higher participation rate from people belonging to the target group?
4. What are the main gaps in employability (transversal and personal skills) in the target group?
5. What are the main gaps in academic skills and qualifications?

Good practice, 'black economy' and automation

6. Are you aware of any successful policies here or further afield that have helped enhance employment in this sector for this target group?
7. Are you aware of any established good practices which have helped achieve the involvement of the target group within the sector, and if so, which one do you think has given the best results?
8. Is there 'black economy' in this sector and in these occupation types? If so, what steps are been taken to overcome this?
9. Do you think that many parts, or all, of the low-skilled jobs in these sectors will be subject to automation in the next 10-15 years?
(PROMPTS for supplementary information):
 - a. Which jobs or activities specifically would you foresee as being subject to automation in the next 10-15 years?
 - b. Which of these specifically can impact your training centre/organisation the most?
10. Do you think automation will impact the way training will be delivered to low-skilled people in the medium future (5-10 years)?

Follow-on

11. Are you willing to join a Steering Group and/or attend a Workshop to help with the remaining year of our work?

COMPANIES

The sector and target group

1. How relevant is the chosen sector for this target group?
2. What kind of jobs to the target group do within your sector?
3. What are the current difficulties/barriers to achieving a higher employment rate from people belonging to the target group?

Skills gaps and barriers

4. What are the main gaps in employability (transversal and personal skills) in the target group?
5. What are the main gaps in academic skills and qualifications?
6. What academic competences/skills do people need to work in this sector and in the kind of roles that low-skilled people are employed in?

Your company

7. Do you train low skilled people in your company?
 - a. If yes, then what would persuade you to train more?
 - b. If no, what would persuade you to start to train them, what are the barriers?

Good practice, 'black economy' and automation

8. Are you aware of any established good practices which have helped achieve the involvement of the target group within the sector, and if so, which one do you think has given the best results?
9. Is there 'black economy' in this sector and in these occupation types? If so, what steps are been taken to overcome this?
10. Do you think that many parts, or all, of the low-skilled jobs in these sectors will be subject to automation in the next 10-15 years?
(PROMPTS for supplementary information):
 - a. Which jobs or activities specifically would you foresee as being subject to automation in the next 10-15 years?
 - b. Which of these specifically can impact your training centre/organisation the most?
11. Do you think automation will impact the way training will be delivered to low-skilled people in the medium future (5-10 years)?

Follow-on

12. Are you willing to join a Steering Group and/or attend a Workshop to help with the remaining year of our work?

Notes from an Interview with the Head of Faculty, Construction and the Built Environment, Exeter City College

The sector and target group

Have some clients come through who started in the industry as labourers 20 years ago and who left school without qualifications but come to the college to acquire a trade - need a qualification for a CACS or health and safety card. Majority of the 'core trades' are that.

But also need the higher level recruits for professional studies area for construction. Need Cs in English, maths and science at GCSE to start on the professional studies qualification at Level 3. That would lead onto the HNC or HND. They can cover the whole range.

Young people coming in with no qualifications can start on a Level 1 full time course (16 hours a week) and learn English and maths alongside that. Then they would move through – that would be in carpentry, painting and decorating (P&D), brick work, plumbing and for the first time this year, electrical.

Entry requirement of Cs for electrical at Level 2 because it is mainly theoretical (50%) and not so much practical (50%). Plumbing is 60% practical and 40% theory; carpentry and brick work have lower theory content so you can start with learners with lower levels of previous qualification.

Opportunities for progression

For plumbing can start at Level 1 then do Level 2 full time or move onto an apprenticeship. The could start Level 3 apprenticeship. Could progress to HNC or HND apprenticeship route (new!)

Higher education routes to apprenticeships are new to them this year. Proving to be very popular.

Exeter College has a very good professional studies set up. Going to the higher levels quicker than other colleges.

Typical pathway: school leaver who did not achieve grade Cs at school (or 4 for English and maths on new system) would come in to do a Level 1 with them and get their English and maths through that route. All have to do English and maths to at least a grade C. Some might never achieve it but they can still progress to Level 2 without it – carpentry, brick and P&D – can do Level 2 apprenticeship with only Level 1 English & maths (i.e. D/E). However need Level 2 in English and maths for electrical, plumbing and the built environment.

If employer willing to pay for your course, then can access Level 2 courses without the usual level of qualifications in English & maths. But college would need to you have Level 2 functional skills for the HNC/HND courses. Would not go above Level 3 without Level 2 functional skills (which is hard as 'a lot' of the sector is dyslexic).

Majority of courses are government funded up to age of 18.

Start on level 2 apprenticeship and then top up to Level 3 for a year. Cannot achieve level 3 unit within the framework without achieving Level 2 first.

In the past, people would have been recruited directly onto Level 3 and taken 3 years to do it but then realised they had high failure rate because it took so long to do it. Now, generally, do a Level 2 in two years and then top up for another year to achieve Level 3. The only exception is electrical which is only a Level 3 and is a four year apprenticeship. Electrical retention at the college is not good – need to get to the bottom of it – doesn't seem to be a problem at other colleges. The 'excuse' is that it is the duration of the course – not evident nationally. Probably needs better advice and guidance initially to ensure that the right people start the course. Need understanding and awareness of that the training and the job entails. They are planning to get out to do more work with the schools to get a better understanding. Need to get into the schools to show they the sector also needs the higher calibre candidates. They can cope with the lower for certain things but they also need the higher – depends on what trades it is.

For construction, it is 50:50 split into the lower and higher calibre students.

The main issue with drop out is in electrical because it is a four year course. Some start at 16 – not sure – sign up with an employer then decide it is not for them after 18 months. If sign up for 2 year apprenticeship you would normally see it out. Some complete Level 2 and then leave the industry but come back later.

Carpentry do not need to progress through to Level 3 as Level 2 is a 'good enough' level to gain employment and earn a decent wage. Can also stop at Level 2 for plumbing and become a bathroom fitter and Level 2 for joinery and site carpentry. Brickwork and P&D level 2 is also fine. Bricklayers can earn £1,500 a week at the moment: some of the apprentices are earning more than the college staff!

If have ambition to be site manager or run your own firm you would go onto the Level 3 but if happy to be carpenter onsite then Level 2 is fine. Qualifications are more technical as the levels go up – whereas core trades – carpentry and brick – Level 3 is more management and supervisory orientated.

At Hinkley Point need one supervisory to every 3 operatives – in process of changing that. Redundancy – shop fitting company in Newton Abbot – lots of guys working for them. Joiners on £11 or £12 an hour. Most of them went on to work as TESCO delivery drivers. Couldn't get any of them to come back to the industry. Other joiners picked up their work. Driving easier on their health, they were older, 50+ age group. Easier to work the shift work. 15 out of 20 left the industry many of whom were really skilful.

Early retirement from the industry due to the physical nature of the work. Apprentices do not get taken on when there is a recession – so skills shortage when the economy recovers – skilful people leaving each year through retirement. Recommends regional skills shortage occupation information on the CITB website. Good document – updated yearly. Includes how many apprentices you need – a lot of information.

Nature of jobs changes so that skills needed from new recruits different from those who have retired? In carpentry – fair amount of specialisation: first fix or second fix, roofing, joinery shops that will only produce staircases or windows; seems to becoming more common especially over the last 10 years. Older joiners will have broader range of skills than the new recruits. One man bands that do

everything are becoming less common. Younger recruits tending to specialise in first or second fix. Specialise in some things – become really quick at for example, hanging a door.

Plumbing specialties include gas fitters, heatass for stoves and solid fuel. More and more separate qualifications out there to bolt onto your main trade. This means people are travelling further for work. An hour is a common travel to work time within the South West, in the industry.

Apprenticeships are being reformed currently – aim to make it simpler but is actually making it harder. The only apprenticeship that has gone through the process easily is electrical – because the framework has not changed. The end point assessment was already there. Every other trade has caused all sorts of problems – they were planning to get rid of P&D level 2 – and just have level 3 but as you don't really need a Level 3 qualification for that trades – they have scrapped that idea already.

“This is industry meant to be designing these qualifications for us – who don't have a clue!” We're sitting back. All frameworks are currently still in draft since July 2016. Industry can't decide what they want – typically big companies get involved – housebuilders – the majority of whom do not know what construction workers do and the skills they need. They know what they think they know but they don't actually know it at all. Causes absolute chaos. College sitting back to watch the space.

Because the new apprenticeship frameworks are not in place yet, the Government has cut Colleges' funding for the old apprenticeships. Harder to deliver within budget. Exeter College has put a contingency plan in place to cover the shortfall but there will be other colleges and private providers who cannot afford to do that. That will affect the industry as they will say they cannot train anymore.

If someone wanted to retain within the industry (to another trade) they could probably do it if they worked for a large company and they could fund training through the Levy – so wouldn't matter than you were 19+. Under new rules you can do another apprenticeship that would be partially funded by Government. Second one you or your employer would have to fund yourself.

No specialist qualifications within joinery.

People generally go into management – supervisory later in life based on their experience. Quite a few young site managers – with qualifications.

Qualifications and skills needed

Maths and English needed – with science subject for electricians and plumbing courses. Both have a science based module within the framework. Downside – they don't do practical courses at school any more – so even those with grade Cs at GCSE need to start at Level 1 for carpentry because they have no practical experience of using the tools. Within construction need to start at Level 1 and work your way through – apart from plumbing and electrical.

Biggest skills shortage when the new students come in – not necessarily academic qualifications but often lack of practical, technical skills. Another is fitness levels of 16 year olds. Used to doing PE in school but then concentrating on exams don't do so much so unfit by the time they enter college. Problem so bad they are building in a programme called 'Fit to Work' to help with fitness levels. Teamwork – they are generally quite good. Small percentage with communication skills issues.

School leavers with low or no qualifications would generally be entered on a pre-qualification course rather than Level 1. Level 1 gives them time to work on their English and maths – and get hand skills up to a decent level. Only about 5% on a Level 2 course don't proceed beyond first term because they 'just haven't go it. They expect 90-92% achievement completion and achievement. Why do people drop out: main reasons are that its not for them or they move out of the area. They would always try to get them through Level 1 but then have a conversation if they think they would struggle beyond that. Lads tend to mature over the summer between 17 and 18 – become more mature. Like switching on a switch – thought processes change: reality hits as they realise they have to earn a living. Raising the participation age has delayed this process: realisation used to come earlier. They have a couple of students with A levels that want to come into construction – interested in the built environment as they have worked for construction companies over the summer. They need to work on their offer and how they attract academic students. Raise profile of the industry – its not just for the naughty lads who did not get on at school. Some of the lads do much better at their GCSEs within the college than at school. They offer more support – (and students probably have fewer subjects to study!) – maturity level, out of the school environment.

Over next 5 or 10 years types of skills changing? Can see demand for skills needed to maintain and repair listed buildings falling. Cobble work, sash windows, traditional plastering. Very specialist skills. Demand mostly for residential build for specialist skills. Redrow skills very traditional in build.

By contrast, Willmott Dixon producing modular primary schools. They can guarantee that the design – the flow- is going to work. Literally wiping the floor, nationally. Built a school in Yeovil in 9 months. The method of construction has changed because it's a modular building but not necessarily a new approach as McDonalds has been doing it for the last 20 years. New restaurants put up within 2 or 3 weeks.

Do you monitor whether students go into work after they have finished the course? Yes, and they do generally stay in the trade. Some leave but come back.

Harder for people to enter the industry for the first time in later life. If in 30s and want to retrain – funding mechanism doesn't allow you unless you pay yourself – if do not have level 2 could get onto Level 2 qualification. Two parts to construction qualification: competency part – about accrediting skills – need portfolio of evidence and assessments in the workplace (NVQ) and then you have the technical certificate certifying the underpinning knowledge within the college. All of their full time courses do the technical/knowledge side; and the apprenticeships do both. Could do the underpinning knowledge as an evening class but you will miss the competency part as this needs to be gained within the workplace to be qualified and to be able to go onsite.

Hard to retain to enter the construction industry. Seeing more mature apprentices now – employers sponsoring. Thinks that eventually the skills shortage will be so bad that there will be a Government scheme to help older people retrain. Teachers for example, given that supplement to retrain. Thinks will happen eventually but not aware of the industry actively lobbying for this yet. Something CITB would probably organise. Government talking to big companies like Screwfix and the Kingfisher group, B&Q but they don't necessarily understand the training needs of the sector. Talking to businesses more than CITB.

Construction as a sector has been supported by the Poles over the last 10 years. They have a training need as well. European workforce not necessarily the best workforce to be using because there is a training need there. Some sites, have to have a H&S qualification to get onto the site. Monitored by having a H&S CSCS card. Must have a minimum Level 2 qualification to get a CSCS card – also need H&S qualification. Biggest forgery in the UK was in CSCS cards 5 years ago. Use of forged cards got really bad during the building of the Olympic Stadium for London 2012. H&S test being done fraudulently. Now have full CTV – needs to be filmed.

Good practice – target group. Good projects – school re-engagement programmes using construction to work with young people to help with their school work and transition to college to undertake construction courses. To help the re-engage they are given more time, attention and encouragement and the opportunity to succeed at something vocational. No practical work in schools so don't have opportunity to succeed. Any CDT that is delivered is technology oriented or technical drawing easy stuff that doesn't cost in materials. Ran a 14-16 programme at the college to give school children opportunity to do something practical but schools can no longer afford to send students.

Wants to get into schools more – work with young people who have practical orientation and take pressure on them to achieve academically. And provision of advice and guidance. Example of a project that went into secondary schools – ran day long workshop to allow them to experience construction skills – ride on digger. Interested in the evaluation of that programme to see how many participants choose to enter construction. Might be more effective for the College to work with primary rather than secondary schools. Working with colleagues at South Devon College on this.

Automation make a big difference to the types of skills needed by the industry? It is having an impact, for example, through increased use of modular buildings and factory built components but doesn't believe bricklayers will ever be replaced by robots! But if need something repaired, extended or on listed building. Thinks skills developed now will still be needed in 20 years time: as buildings age – need to maintain and repair them. Will we need building sites: will houses be assembled from factory built components and construction workers become assemblers? Will still need people to create the assembly line. If could have been done would have been done by now.

Look at the German apprenticeship programme – that has never changed model in the last 40 years. Don't see many German construction workers working elsewhere. Hard apprenticeship. Why successful – it hasn't changed and employers heavily involved. They do two years full time at college and then do a year in industry to get the competency side of it. Have that good underpinning knowledge. In the UK, industry experience is combined with one day in college a week.

Is interested in participating in the workshop. Doing more community projects than ever before – very keen on school engagement and promoting construction. Construction department at the college is small given the size of the City.

Interview with Jobcentre Plus, Plymouth exploring good practice in Plymouth.

Gary is Employer Engagement Manager with lead for construction in the Plymouth area. He runs sector based work academies with private companies to help with CSCS cards and moving them into the sector.

Biggest problem - joining them up with sympathetic employers. Some big players are on board (KEIR, MIDAS, My Space, Plymouth Community Homes and others).

Building Plymouth is a council led partnership with a Job Shop and it's for anyone to help sign post to jobs. Also get people registered and details go to sponsors and others. Emma Hewitt is the person who leads on this and is employed through the City Council to coordinate providers and employers – GOOD MODEL. Also engages with schools...

150 different groups in construction and increasingly high tech. Also work with JCP – Roy Imerson.

Sector has a skills shortage across all trades. Average age of a Plant Mechanic is 65. Average age on site is around 50 in Plymouth. *There are lots of apprenticeships but some do not pay higher than basic if they could get more at retail or hospitality with far worse prospects.*

Some young people not reliable. They do give experience and a CSCS card but some don't want it. But some are real successes.

Good Practice – sector based work academies where they give 2 weeks for CSCS then 6 weeks on site doing different trades. Looks good on CV. Some go on to apprenticeships and some on to work. Cornwall College is linked to employers and others and City College are linked to KIER – so Colleges are key for that though JCP also have good relations with contractors and can sometimes get people placed.

Shekinah Mission did 1st building a few years ago. Hardest to reach young people and that is a good scheme. 2 from last cohort have apprenticeships with SW Highways. Emma also coordinated this.

KEY is joined up working and getting everyone involved – gets great results.

Big companies easier as they have community engagement managers and similar.

Levy – not made much difference in Plymouth...

Maybe for our events – we invite Michelle Coe from Midas Construction – who is their community representative person, plus Emma and Roy.

Interview with JCP SW Staff (including Hinkley)

- Ali is Partnership Manager for Somerset and Hinkley
- Lisa is Employer Engagement Manager for Devon, Cornwall and Somerset

There is a very tight labour market and it is not easy to recruit and employers may have high expectations given availability of young people.

There needs to be more work on Construction as a career as many see it as a short term stop-gap – so needs more emphasis on:

- career development
- LAG is poor
- Family and school perceptions seem to be negative about the sector

They have done interesting work with Hinkley on career progression and women into construction as schools were not aware of the possibilities.

You don't really need qualifications as such for the sector but employers are looking for soft skills around timekeeping, attitude, employability etc.

JCP do quite a lot of short term training in things like CSCS cards but for these there is also a need for the experience on site and that can be challenging to gain. This lack of site experience is a problem.

CITB contacts to pursue is ideally Karen Blacklaw or Roy Imerson and they are holding an event in the next few months as CITB.

JCP use sector based work academies and deliver 2 weeks pre-employment training and 2 weeks employment experience as part of a 6 week package. Availability is driven by employers coming to them for people. The college-employer relationship is also key – so linking the 3 is important.

Funding follows individuals based on need and comes from the state. It is fairly flexible.

They ran a steel-fixing course not that long ago with Hinkley and had a group of YP from their cohort on this. They needed a lot of support/nurturing when away from home but have all got jobs now. It was quite resource intensive but successful with funding from DWP/SFA and EDF. – **this I think is a case study written up by Bridgwater.**

JCP want to do more with families and schools and employers and also see a need for help with getting people with a disability into the sector – could be an event here – I think or targeting the very hard to reach... these 2 groups are most of the people left

Gary West in Plymouth and Kier in Cornwall have done interesting things with these groups in construction and we should get case studies from them.

Main employability gaps are 'attitude' 'commitment' 'respect for the employer' and 'time-keeping'.

The JCP approach is 'coach-athlete'.

Universal – credit fits quite well with the sector where people can go in and out of work – though once employed most do not come back to JCP at the moment.

Not sure about automation – best ask CITB – but there is a need for more specialist skills given the nature of onsite working.

Young People need 'pre-programme' to get them ready for any real training or work experience. They can provide this and mentoring. On the whole few people in work are moving looking for construction work though some do this through 'Response to Redundancy' activities.

Also have a large group of people with mental health issues.

Other Interviews were recorded and are available as electronic transcripts for:

1. Operations Director, Hinkley Point Training Agency
2. Regional Manager, Prospects Services
3. Group Community Engagement Manager, Midas Group Limited

Analysis of data

We used the labour force survey (UK) and annual population survey (UK) which we derived ourselves plus some EUROSTAT data supplied to us by Prospektiker.

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