



# **Sector Skills Assessment for the Construction Sector 2009**

## **ConstructionSkills Summary**

## 1. Introduction

ConstructionSkills is the Sector Skills Council for construction. As a partnership between CITB-ConstructionSkills, the Construction Industry Council and CITB-Northern Ireland, it covers the construction sector from planning and design through to construction and maintenance, and represents occupations from crafts through to building professionals.

This paper is a summary of the main UK report which describes the current and future skills priorities for the construction sector, demonstrating the contribution that construction makes to the economy and highlighting priorities and potential barriers to growth.

### 1.1 Current and Future Skills Priorities

Construction is an important UK sector and ConstructionSkills has a leading role to play in unlocking the talent of individuals and improving the performance of construction firms and professional consultancies.

In the short-term the challenge is to respond to the recession and there is ongoing pressure to survive, but long term skills planning is essential.

Looking forward ConstructionSkills has identified four key themes that must be addressed if industry is to successfully operate in the current environment and exploit new and emerging opportunities:

- Attracting and Retaining Talent.
- Developing Talent.
- Improved Business Performance.
- Strengthening the Skills Infrastructure across Nations.

## 2. What are the Factors Driving the Demand for Skills?

Construction is a pre-requisite to all other economic activity and forms a significant part of the UK economy in terms of employment and wealth generation.

Employing 2.35 million people the combined employment of construction workers and professionals account for over 8% of the UK workforce, and with an output in 2009 of £97 billion (at constant 2005 prices) the sector contributes approximately 8.5% of the UK's GDP.

The construction sector, including professional services creates around £84bn of value added and is estimated to generate over £10 billion in export earning. All of which is actually produced from a fairly fragmented sector.

The construction sector is characterised by:-

- A very large number of small firms. (92%).
- A large share of manual workers (55%).
- A third of its workforce self-employed (37%).
- Employment skewed towards the South of England.
- An itinerant workforce.

Despite its reputation as a physically demanding industry, construction requires an increasingly diverse and flexible workforce. The sector has traditionally suffered from an unfortunate image in terms of low pay, poor working environment and little job security, particularly in respect of craft and operative roles. Such perceptions have made it difficult for employers to attract talent. In terms of relative pay, wages for manual and non-manual occupations are above the national average.

The construction industry is notoriously cyclical and very sensitive to changes in the macro-economy. This is reflected in workforce flows. The construction industry has at times of recession lost significant numbers of workers, many of whom do not return. The ageing of the workforce both for manuals and non-manuals can partly be attributed to the redundancies during the early 1990s and the subsequent difficulties in attracting workers back into the sector.

Indeed, there is now a very real risk that the outflow of skilled workers through redundancy and the natural flow to other sectors will adversely impact on the recovery when it eventually comes.

## **2.1 Current Performance - What is Driving Change?**

The economy is a prime driver for change across the sector. Demand for large numbers of good quality housing, hospitals, schools, commercial premises, roads and infrastructure have characterised the last five years and are generally set to grow, albeit at a considerably slower rate, over the next five.

The impact of the recession on the construction sector has been nothing short of dramatic in terms of its impact on jobs and workloads. Indeed, 2009 has been a particularly difficult year with a sharp decline in construction output.

Whilst recent events in the UK economy – the credit crunch and subsequent recession – have changed the short-term picture for construction, there is little doubt that the long-term trend is for rising levels of construction activity, which will continue to present career opportunities.

The slowing rate of decline, evident in slowing rates of unemployment and increasing levels of enquiries, presents an encouraging perspective moving forward in the medium to long-term, although the road to recovery is expected to be long and painful. Forecasts from the Construction Skills Network and Experian suggest it is unlikely that output and employment will return to pre-recession levels until after 2014.

Whilst, the recession has severely impacted on the sector the picture is mixed in terms of output and new orders, and it would be wrong to believe that activity has declined across the whole industry. Infrastructure and public non-residential have benefited to some degree from the Government's fiscal stimulus package. Where as Housing has undoubtedly suffered the most as a result of the downturn.

Construction output in the UK regions and nations varies quite widely and is very much linked to the performance of the wider macro-economy.

The global nature of the recession has affected markets and trade worldwide, and construction has suffered in the vast majority of developed economies.

The worldwide decline in construction activity has most notably impacted on UK professional services, and has been particularly visible in the reduced demand across the Middle East and Asia.

As well as exporting skills and expertise the UK construction has also benefited from migration. Construction is, and always has been, a migratory industry. There is an expectation that people will go where the work is. This applies to both foreign nationals entering the UK labour market and UK citizens finding work abroad. The experience is also closely linked to economic cycles.

New technologies and innovations are generally adopted if, and only if, there is a sympathetic set of business, legislative or cultural conditions. An inadvertent benefit of the

current recession is that it may provide the catalyst for innovation within the construction industry.

Demographic changes shape the expectations of customers, as well as influencing the ability of industry to meet their demands. The needs of the population in terms of housing, healthcare, education, infrastructure, work and leisure drive construction outputs, yet these are only achievable if there is sufficient capacity in terms of labour and skills.

Legislation remains a key driver for change across industry sectors as a whole and within the construction sector specifically. It is interesting that within the UK construction sector the Government is doubly important as both a legislator and as a major client. There is a balance to this relationship, since without a strong and effective construction industry the Government will not be able to fulfil its electoral obligations. UK government has historically driven 30-40% of construction output.

Whilst not entirely unique, the construction industry is responsible for supplying goods and services to consumers at all levels, from individual members of the public to private companies and Government.

The construction industry has a broad client base, all of whom have different demands and expectations and to some degree this is reflected in the fragmented nature of the industry. In this respect the sector might be better described as a collection of separate industries. Certainly the face of the industry dealing with the domestic market building house extensions and undertaking home improvements is very different to that responsible for building a new school, hospital, or sports stadium.

Nevertheless, it is demand across this wide and varied client base that drives what, where and how the industry builds.

Productivity improvement remains a central pillar in the overall ambition to up-skill the construction workforce, although efforts to improve performance have also focussed on changing the structure and modus operandi of the industry.

Over the period 1998 to 2008 the GVA per employee has been steadily increasing, and in 2008 was more than double its 1998 level. This however may have less to do with operational improvement and more to do with the incompleteness of the statistics in respect of industry coverage, increased demand and inflated land prices that have predominated over the period.

Indeed, there is general agreement that productivity in the sector lags behind other areas of the economy and compares poorly with other countries, particularly the United States.

### **3. What have been the Recent Trends in the Supply of Skills?**

The UK Construction Industry is relatively well catered for in terms of the supply of skilled new entrants via education and training. The latest available data providing a full UK picture (2007/2008) shows approximately 68,000 enrolments onto construction courses at both further and higher education.

Analysis of the skill levels of the construction industry shows improvements at both ends of the scale. Both proportionately and in absolute numbers, there has been a significant increase in higher level qualifications and subsequently a decrease of those with no qualifications - certainly progress towards a fully qualified workforce. Overall there appears to be a decline in lower level qualifications, which could be attributed to the retirement of less well qualified people in conjunction with improvements in the qualifications held by new entrants.

Further analysis finds the biggest majority (28%) of entrants from other industries are qualified to 'other higher' level (covering higher level qualifications below degree level such as HNC and HND), although 15%, a considerable amount, of entrants do not have a qualification. In addition 68% of people entering construction from other industries last worked in construction less than two years ago. It is assumed that individuals who have worked outside the industry for less than two years can still be counted as part of the construction workforce and thus have the necessary skills. This finding reflects the mobility of the construction workforce in terms of their ability to move in and out of the industry as work dictates.

The flow of workers from overseas needs to be considered in terms of the level and type of skills they are bringing to the UK construction industry.

Overall 87% of recently arrived workers in the construction industry have some kind of qualification. For the majority this was a qualification other than a UK recognised NVQ equivalent or trade apprenticeship. However, 13% of recent arrivals have no recognised qualifications. Therefore, a continuing priority for the UK construction industry must be to ensure that workers arriving from overseas to work in UK construction are equipped with the necessary training and skills to enable them to do so effectively and safely.

### **3.1 What has been the Level and Type of Skill Development within the Workforce?**

Half of establishments across the UK Construction Industry had funded or arranged training or development for staff during the 12 months to July 2009.

Overall more than two-fifths of employers deliver some off-the-job training. This is largely driven by the practices of smaller establishments with 2-9 employees, and among large firms that train; nearly all undertake some off-the-job training.

Establishments had provided an average of 6 days off-the-job training and 6 days on-the-job training per employee. Professional services firms provide slightly more off-the-job training days per recipient than construction firms (8 compared with 5 days), though there was no difference for on-the-job training.

Whilst the extent of training is considerable it is important to measure the extent to which it will feed into increased qualification attainment. Just fewer than half the employers that train (44%) had provided training intended to lead to a nationally recognised qualification.

Just over half of employers that trained would have preferred to provide more training than they actually undertook. The two main barriers to being able to deliver more training were a lack of funds for training/training being considered expensive and not being able to spare staff the time off for training.

Supply-side issues were relatively rarely mentioned as barriers: among those that would have liked to deliver more training 3% mentioned a lack of appropriate training or qualifications in the subject areas they required, 3% a lack of provision (for example courses being full up), 2% the difficulty of finding providers who can deliver training when and where they want it and 1% mentioned a lack of good training providers locally.

#### 4. Current Mismatches between Demand and Supply for Skills

In an efficient labour market, the skills of the workforce will be sufficient to meet employer needs and the supply of skills is aligned with market demand. If either supply, demand or the matching processes are deficient, several types of mismatches occur. The first is skill shortages, which arise when employers find it difficult to fill their vacancies with appropriately skilled applicants. The second mismatch that occurs is skill gaps, where the existing workforce is seen to be lacking the skills necessary to meet business needs. The third dimension is unemployment.

ConstructionSkills research found far fewer employers in 2009 reporting skill shortages over the previous 12 months, compared to 2008. These findings are consistent with trade survey results from organisations across the construction industry, who all reported a considerable decrease in recruitment difficulties to a record low.

Additionally fewer employers also reported any skill gaps in 2009 than in 2008. As skills gaps are very often explained by recruitment activity whereby staff are taken on who are not (yet) fully proficient; part of the reduction in the incidence of skills gaps is explained by reduced recruitment activity during 2009.

When asked what factors limited their business now and were likely to impact in the future, predictably the recession and low or uncertain demand were top of mind – as many as 56% mentioned this as a current limiting factor for their business and 66% expected it to act as a constraint over the next 12 months.

Labour shortages and skills shortages were mentioned by very few employers as a limiting factor now or in the near future, confirming that demand-side not supply-side issues are currently seen as critical by employers.

These findings are directly comparable with data from Construction Forecasting and Research (CFR) at Experian, which reported the biggest constraint to be insufficient demand with no employers reported labour shortages to be a constraint on activity.

As the incidence of skill shortages has decreased significantly across the construction industry and is currently not considered a constraint on activity. For the most part, this is due to a reduction in recruitment activity, as a consequence of the recession. In conjunction with this impact, firms have also had to make redundancies.

Recent research in the professional services sector found that just under half of firms had to make redundancies due to the recession in the past 12 months. Whilst it is not possible to know whether these professionals have been re-employed within the industry, it would seem unlikely as approximately half of firms also stated that they had to cut back on recruitment. Therefore it can be thought that the professionals made redundant had either moved into another industry (4.8% of outflows from construction were to other industries) or more likely they were unemployed.

The biggest outflow from the industry is to unemployment, now standing at 6.9%; it's highest level over the 15 year period. As unemployment is considerably higher in the construction contracting sector (7.4%) than for professionals (4.1%), it can be assumed that redundancies are affecting the whole construction industry.

The impact of the recession across the construction industry has radically affected the mis-matches between demand and supply. While on the one hand skills shortages (and to a lesser extent skill gaps) have decreased dramatically, this has been at the detriment of unemployment. Although skills shortages are currently at an all time low, lessons need to be learnt from the previous recession. One of the biggest risks to the recovery of the construction industry is a shortage of skills as people made redundant seek new careers outside the industry and new entrants unable to get a job, look elsewhere.

## 5. What New and/or Changing Factors will Influence Skills/Employment Demand in the Future?

The UK economy has, so far, contracted by 5.8% during this recession. The 2.5% decline in the first quarter of 2009 meant that the UK economy lost as much ground as the entire 1990s recession. The outlook remains weak with unemployment rising across all sectors and results from the Construction Skills Network<sup>1</sup> demonstrate a 13% decline in construction output in 2009 and very moderate growth is not expected to return until 2011.

Politically, the immediate challenge is the pressure on government to address the huge public debt, (thought to reach record levels and represent as much as 90% of GDP by 2013) It is highly unlikely that any future government will take the risk of running with such a large level of debt and any further government stimulus is generally viewed as having 'run out'. Current government expenditure is virtually committed until April 2011. It is likely therefore that it will be 2012 before the full force of public capital expenditure cuts will be felt.

Large construction related programmes such as the Building Schools for the Future, hospital builds, motorway expansion schemes and investment across Northern Ireland could all be under threat, though it's recognised that expenditure cuts to some programmes will be more politically palatable than others. The greatest risk to economic recovery will be a series of increased financial measures which have the affect of preventing a recovery in the private sector. This, coupled with a reduction in public investment could generate a 'double dip' recession and negate any chance of slow recovery in the short to medium term.

A series of factors will need to take place to enable consumer confidence to return. This needs to be led by a stabilisation of the housing market, asset prices rising, debt consolidation, a reduction in debt to lending ratio's and a turn in the inventories cycle to stimulate manufacturing. However higher inflation, a future rise in interest rates, sterling weakness, VAT reversal and wages freezes will continue to promote a further rise in unemployment.

As the recession has deepened, unemployment in the construction sector is now significant. Unemployment tends to lag construction output by at least one year and there is evidence in the market to support the view that many larger firms have placed extremely low tender submissions on projects to 'win work' and sustain trading. This approach runs a substantial risk of backfiring in the future as margins will be squeezed and many firms may cease to trade, thus creating further job losses.

This may have an adverse affect in terms of future recruitment possibilities. The industry has already lost a proportion of its skills base and there is no clear evidence to support the view that many will return to the industry in times of economic recovery, unless government led stimulation is provided.

In the longer term there is a need to reflect on the changing skills needs of the industry in terms of examining the drivers that will promote future skills.

The economic downturn, long term climate change and energy security are all interacting to create the development of a potential new economy which will have an element based on what is being labelled as 'green jobs'.

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<sup>1</sup> The Construction Skills Network is a construction industry demand forecasting model produced by ConstructionSkills and Experian: see [www.cskills.org/csn](http://www.cskills.org/csn)

Almost half of CO<sub>2</sub> emissions are connected to the built environment. This means increasing emphasis on the built environment based solutions, for example by renovating/retrofitting existing homes and non domestic buildings to be more energy efficient and building renewable power systems.

This has the twin benefit of stimulating the economy and helping shape a low-carbon future. Tackling CO<sub>2</sub> in new buildings alone will not provide the required improvement, a major programme of adaptation and refurbishment of existing buildings will also be required.

For construction to be in a position to respond effectively, the industry has to ensure it has the skills to deliver by developing a more creative and innovative approach. Currently 12% of all construction activity is manufactured offsite and this requires ongoing skills links with the manufacturing sector. Offsite construction could increase significantly as the industry moves from recession to recovery as the main aim will be to increase productivity and effectively achieve more with less.

Generally though, 'future' skills are not entirely new skills. In many cases the skills are either an addition to, or amalgam of existing skills. Construction is a vast range of industries and many small firms will not currently require or utilise innovative methods and the traditional parts of the industry will co-exist alongside the emerging 'green' industrial markets.

As stated, a change in skills requirement will also vary across the industry supply chain and at management, professional and skilled trade levels. There are some fairly broad observations that can be made in terms of understanding low/zero carbon technologies, working to greater tolerances, an appreciation of 'air tightness' in buildings and a greater manufacturing input into training.

Construction companies are very aware that they require long term change to remain competitive and meet forthcoming legislation and if the scale of the change to meet new legislation is to be achieved, there will need to be an equally ambitious programme of training and awareness raising for the existing workforce.

This will also have the impact of maximising potential job creation opportunities and the investment in 'green' industrial policy. This applies to new build and repair and maintenance activities, across supply chains and could present any future government with an opportunity to invest in the future of construction in the UK, via innovation and change.

## **6. What is the Likely Demand for Employment/Skills in the Future?**

There are obviously a number of factors that will influence employment and skills demand in the future, therefore to try and understand them we have outlined what we see as the core scenario facing the construction industry through to 2020, along with possible significant variations that may arise.

Our core scenario for the construction industry assumes that:

- UK economy emerges from recession in 2010 followed by a gradual recovery to long term levels of GDP growth of around 2.1% p.a. through to 2020.
- UK construction output will start to recover from around 2011 although at lower levels than GDP growth.
- New work will continue to be the main driver of output.
- Levels of productivity growth will remain low.
- Housing demand for both public and private sectors recovers.
- Work in the public non housing sector shows no real growth due to restrictions in public finance.



- Commercial and industrial new work, both very badly affected in 2009, recover through to 2020; however there is no real growth.
- Infrastructure sector work is forecast to grow in the short to medium term and the long term prospects for energy infrastructure look positive with the government commitment to CO<sub>2</sub> targets.

There were also four significant variations to this scenario which were noted, and would make a difference to employment and skills. These are:

1. Stronger Recovery: where the economy recovers at a quicker pace.
2. Double Dip Recession: the recession deepens and there are further job losses.
3. Low Carbon Transition: there is significant progress with upgrading existing housing stock, zero carbon targets apply to a wider range of new build work and there is significant progress with energy infrastructure work.
4. Modern Methods of Construction: where there is a rapid adoption of innovative working practices as industry looks to improve productivity in a highly competitive environment.

In respect of construction employment: the core scenario has three distinct phases for overall employment numbers:

- 2010 – 2011, industry still dealing with recession, further job losses then stabilisation. Work in public non-housing and infrastructure sectors important for employment.
- 2012 – 2014, low employment growth as industry comes out of recession. Housing and infrastructure sector work important.
- 2015 – 2020, employment increases to approach 2007 – 2008 peak levels. Housing, infrastructure and repair and maintenance work will be key sectors for employment.

With the variations to the core scenario the double dip recession would mean employment being well below 2007/2008 levels. Both the stronger recovery and low carbon transition would see employment rise above the core scenario, however increasing adoption of modern methods of construction could have implications for onsite employment.

The implications for skills suggest that there will be increasing demand for higher levels of skill across the industry, especially those at Level 4 and above and skilled trades will remain the dominant grouping for qualifications within the industry.

The development of energy infrastructure and low carbon technology will be strong drivers of demand for both the infrastructure and housing sectors. Workers who join the industry by 2020 will require different skills to those needed today, and this applies to the full range of occupations from skilled trades, architects, designers and construction managers.

The key drivers that will influence the demand of skills to the construction industry are expected to be:

- The roll out zero carbon targets for buildings.
- The retrofitting of existing buildings to meet code for sustainable homes.
- Greater use of modern methods of construction (MMC).
- Tougher market forces, regulation, and client attitudes demanding a more skilled workforce.
- Expanded Health & Safety Legislation and Regulations.
- Greater use of new construction materials.

With the variations to the core scenario, low carbon transition and modern methods of construction will mean increasing demand for the up-skilling of existing workers and acquiring new skills to respond to these challenges.

## 7. The Future Supply of Skills and Employment in the Construction Industry

Over the course of the present forecast approximately 16% of the manual construction workforce will reach retirement age, resulting in a loss of accumulated skills and experience.

In 'normal' times this loss would be replaced by new recruitment, however, in the medium term the supply of skills to the construction industry will remain subdued owing to only moderate growth within the industry. Beyond 2015 it would seem likely that the supply of skills and employment will begin to increase in response to the rising demand that is expected at that time.

The changes in demand noted earlier will be reflected in the supply of future construction workers. They will require skills that focus more toward assembling manufactured components, utilise computers at each stage of the construction process and have a greater understanding of trades other than their own, in particular how different aspects and components of a finished building will interact.

It is important to examine the three key routes for skilled workers to enter construction:

- Through gaining a vocational qualification.
- After graduating from a Built Environment Degree course.
- By migrating from another country.

### 7.1 Craft Training

The main supply of skills has traditionally been via work-based training with the largest investment in craft training coming from employers. During the two previous recessions in the UK training fell dramatically, and continued to fall for some time afterwards. After both recessions training did not reach its lowest point until some four years after the technical end of the recession. Its estimated training will reach a low point of around 35,000 VQ starts by 2015, before returning to its pre-recession levels of around 42,000 VQ starts 2020. Having achieved a qualification, some 95% of successful completers stay in the construction industry, mostly in the trade in which they studied. Extrapolating this we can estimate that the supply of skilled workers through the Further Education route would be approximately 24,000 per annum in 2015 rising to 28,500 per annum by 2020.

### 7.2 Higher Education

There are three factors that influence demand for Higher Education – changes in the population from which students are drawn; the ability of those people to enter higher education; and the willingness to participate in higher education.

Recent trends demonstrate rapidly increasing demand for HE places, despite the introduction of variable fees, influenced largely by increases in the 17 to 30-year-old population. Numbers in HE are likely to continue increasing up to 2020, the pace of change will be slower owing to demographic changes in the core 18-20 year old HE population, which is expected to decline by 13% between 2010 and 2020. Owing to changes in the social composition of the UK population with fewer people are being born in the lower socio-economic groups and more in the higher groups that traditionally embrace HE, the decline in the 18-20 year old population is not expected to lead to declines in the number of HE students. The proportion of young people taking A levels or Higher exams, will lead to a potential increase in degree courses. The requirement for young people to continue in post-16 education or training by law will fuel this increase.

Although there is likely to be moderate growth in Higher Education starts between 2010 and 2020 it is unlikely that the dramatic rises that preceded this period will be repeated. Assuming consistent moderate growth of 1% a year between 2007 and 2020, this would equate to an additional 2,000 HE starts, or nearly 16,000 UK domiciled individuals across

the UK. Trends indicate that around 25% of these students that graduate will enter construction, or around 4,000 people per annum by 2020.

### 7.3 Migration

Figures from the Labour Force Survey indicate the numbers of those we count as migrants (foreign nationals who have arrived in the last ten years) working in construction increased from around 20,000 at the end of 2001 to around 120,000 at the start of 2009, with the majority of growth coming from just five countries: Poland, Lithuania, South Africa, Romania, and India.

This inflow will decrease in the future, due in part to the recession and to the more stringent points-based immigration policy. Up to 2020, it is expected that the flow of migrant workers into construction will probably be around the 7,000 average figure seen throughout most of the first years of the 21<sup>st</sup> century.

Approximately half of migrant workers to the UK construction industry have been self-employed as opposed to 37% of UK workers. While being self-employed is no guarantee of skills, it points to a general level of competence to work un-supervised.

The accepted minimum qualification in the sector is a Level 2 Vocational Qualification. Over four-fifths of migrant from the top five countries of origin, and almost two-thirds of those from other countries, do not meet this minimum criterion. Likewise UK national manual workers are three times more likely to have a trade apprenticeship than migrant workers from the top five countries of origin, and ten times more likely to have a Level 3 qualification (roughly equating to site-supervisor level).

To summarise, migrant workers can be divided into roughly four separate groups:

- A small group of highly skilled, highly qualified workers that tend to work in managerial or professional positions, or to some extent skilled occupations.
- A second group, roughly equal in size to the first, consists of unskilled and unqualified workers who work in elementary occupations in which skills and qualifications are less of a requirement.
- The third, and largest group, is made up of people who are sufficiently skilled to work unsupervised in a self employed capacity.
- Finally as many as a quarter of migrants, who work in skilled occupations, but who lack the skills and qualifications required to work effectively and safely.

Therefore, it is possible to estimate that around two-thirds of migrant workers have the skills or qualifications to work to an acceptable level within the UK construction industry. Using the assumption of net migration in the region of 7,000 per annum this suggests an average of just over 4,500 additional skilled workers a year joining the industry between 2010 and 2020.

Having examined the three main sources of skills supply some very tentative estimates can be made about how many skilled workers may be available to join the industry each year by 2020. From FE the number of people qualifying each year and that will wish to remain in the industry will be in the region of 28,500. From HE the number of people graduating each year and that will wish to make a career in the industry will be in the region of 4,000. And finally the number of skilled migrants entering the UK each year by 2020 will be in the region of 4,500, making an annual total of 37,000 skilled people a year.

## **8. Conclusions and Key Messages**

### **8.1 Conclusion**

The construction industry has not experienced as much pressure from external market forces since the early-1980s and the focus is now on how it can adapt to the changes without undermining potential for recovery and future growth. UK construction output experienced sustained growth for 14 years to 2008, and despite skills shortages it has managed to deliver ambitious and high profile building projects at the heart of the nation's future. However, changes first set in motion by a slowdown in the global economy and accelerated by recession now present a very serious threat to the overall stability of the industry.

It is in this climate of uncertainty that the industry is most at risk, not only in terms of its ability to deliver existing projects, but also in terms of safeguarding jobs and ensuring opportunities exist for the next generation of workers whether apprentices, graduates or migrant workers.

Widespread redundancy has resulted in increased outflows to other industries, and it will become increasingly difficult to restore skills when growth returns. History shows that some of the most experienced workers leaving the industry will not to come back, which may cause major problems for the country to deliver future requirements in respect of much-needed affordable housing, schools, hospitals, transportation infrastructure and energy generation schemes; all of which must be completed with minimum impact on the environment.

Construction activity is an essential prerequisite for growth and improvements in society and is of vital strategic importance. There are strong inter-dependencies between the performance of the macro-economy and construction activity and a steady recovery from recession will be critical in terms of supporting and promoting the change agenda.

The UK faces a number of crucial challenges in relation to the environment, energy security, carbon reduction, resource efficiency and waste reduction. The construction sector has a critical role to play in delivering these commitments, but also in providing sustainable employment and growth.

The construction sector of the future will, despite much forecasted change, share many features with the industry of today. Many site activities, including site preparation will still need to take place, materials (albeit in smaller volumes) will still be stored around sites and construction will require working at height. Staple materials such as wood, steel, glass and plastics will still be in use alongside new composites, and skilled labour will be required to assemble these materials (whether on-site or in a factory environment). However, the methods and technology employed during this construction process will be drastically different.

The specialist skills demanded to meet the high specifications and low energy requirements of future buildings and infrastructure require new levels of expertise in terms of product knowledge, for both professional services and craft trades, and working to more exacting tolerances in terms of timing and quality of construction.

However, new ways of working will not all require totally new skills, but will often be an addition to existing workers skill-sets. Certainly to deliver a more effective, efficient and productive built environment sector, designing and constructing to minimise the use of natural resources, will mean a significant shift in the skills of large parts of the existing workforce. If the construction sector, as proposed, adopts more sustainable working practices backed by new and emerging technologies then this will inevitably result in the erosion and revision of some traditional trade activities with the introduction of a more generalist or multi-skilled approach to the construction process. In this respect, the recession and subsequent recovery offers a real opportunity to redefine a number of

existing roles within the industry, as well as presenting additional opportunities in new areas.

Taking these factors into consideration, the industry must not only broaden its horizon with regards current skills needs, but must also lengthen its perspective with regards future needs and possibilities. The reality is that the industry has consistently performed well in recent years, probably better than expected, outperforming its perceived limitations and doing so in spite of weaknesses in skills supply. However, it is extremely doubtful if this approach can sustain further significant growth. The current project-based structure of the industry does not provide an easy business case for training and the extensive use of the self-employed and labour-only sub-contracting presents a significant barrier in any attempt to promote a training culture and qualify the workforce, so there is a need to develop new methods of provision and funding which reflect the reality of the sector.

Driving this agenda forward will require strength and commitment from a multitude of stakeholders and employers at every level. In order to maximise opportunities the construction industry will need to develop not only its technical capability but also its ability to interface with other sectors and work in tandem with multiple agencies. This will require a significant shift in the skills and competence of the existing industry as part of a major process of innovation. In order to establish innovation and integration, the underlying skills and qualification structure needs to be examined - from entry through to high level - to ensure that the skills are backed by qualifications and, where necessary, accreditation and/or certification.

As markets develop, particularly in the adoption of new products and processes, companies - and especially small and micro businesses - will need to gain the leadership and entrepreneurial confidence and competence to discuss green issues with clients and suppliers. It is critical that businesses, across the construction and built environment supply chain, are supported, as appropriate, in relation to people development - this support may be in the form of advice, training and the time and financial resources required. ConstructionSkills together with the built environment Sector Skills Councils is well placed to support this.

## **8.2 Key Messages**

ConstructionSkills has identified four key themes that must be addressed if industry is to successfully operate in the current environment and exploit new and emerging opportunities:

- Preserving the skills base through the downturn and maintaining readiness for an upturn.
- Keeping the pipeline of talent flowing through targeted recruitment, supported by skills development and career progression.
- Investing in the future, improving management and leadership skills and supporting sustainability and innovation so that the industry is able to direct resources more effectively and fully realise new opportunities.
- Encouraging clients to invest in skills, particularly through public sector procurement practices and engagement in new training models.

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