# Addressing the construction skills shortage: Is education enough?

**An essay addressing the skills shortage in the UK construction industry, analysing data to encourage the reformation of the UK education model amongst additional broad-based measures.**

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# 1 INTRODUCTION

A much publicised and prevalent topic within construction in recent times is that of the skills shortage facing the industry at all levels. In recent times the issue has become much more prevalent and many key industry commentators are now stating that our industry faces a bleak future if measures are not undertaken to ease the skills shortage.

This paper will centre around two questions:

1) What does the current level of skills shortage hold for the future of the industry?

2) Can this skills shortage be addressed through education alone?

It will then seek to provide a broad range of recommendations that both the industry and the government should consider pursuing to provide a proactive approach to tackling the skills shortage.

# 2 FUTURE OF THE INDUSTRY

The UK construction industry is facing a national issue concerning the skills shortage, this is not just confined to professional roles within the sector but also to the trades; there is particular concern around the problems that the industry will face in the future due to the skills shortages. The UK has numerous large infrastructure projects as well as rapid growth in new housing stock planned and the questions being asked centre around the ability of the industry to deliver future projects and maintain industry growth.

## *2.1 Future of Labour*

Demand for construction is continuously increasing but the supply of labour able to undertake the work is dwindling, it is estimated that in the next ten years 700,000 workers in the construction industry plan to leave through retirements and general loss to other industries, these must be replaced to ensure demand is met but another 120,000 workers are also needed per year to ensure capacity growth within the industry (Arcadis, 2015). Mark Farmer, author of 'Modernise or Die', a government-backed review into the UK construction labour model, discussed that based on existing workforce age and current levels of new entrants the workforce could shrink by 20-25% within the decade if not addressed properly (Farmer, 2016).

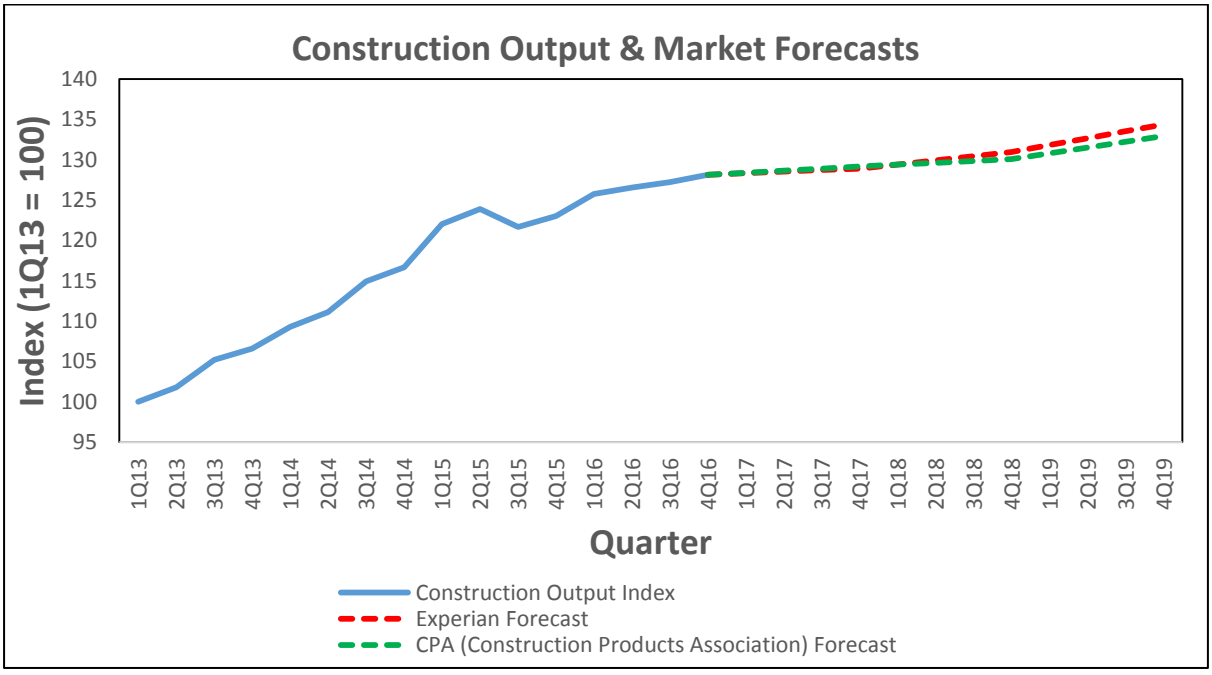


**Figure 1 – Source – BCIS (Building Cost Information Service)**

Figure 1 details UK construction output since the first quarter of 2013, this has been increasing rapidly and is forecast by market commentators such as Experian and the Construction Products Association to continue. With the above in mind, shortages in the labour supply may hinder this forecast growth in output, increasing output requires more projects and subsequently more demand for construction labour.

There are also significant concerns that the vote to leave the European Union will have a further negative impact on the skills shortage; depending on the deal reached with the EU by the government, migration to the UK may be slowed or stopped altogether. Figure 2

below outlines the number of construction workers by birth area who are employed in the sector in the UK.

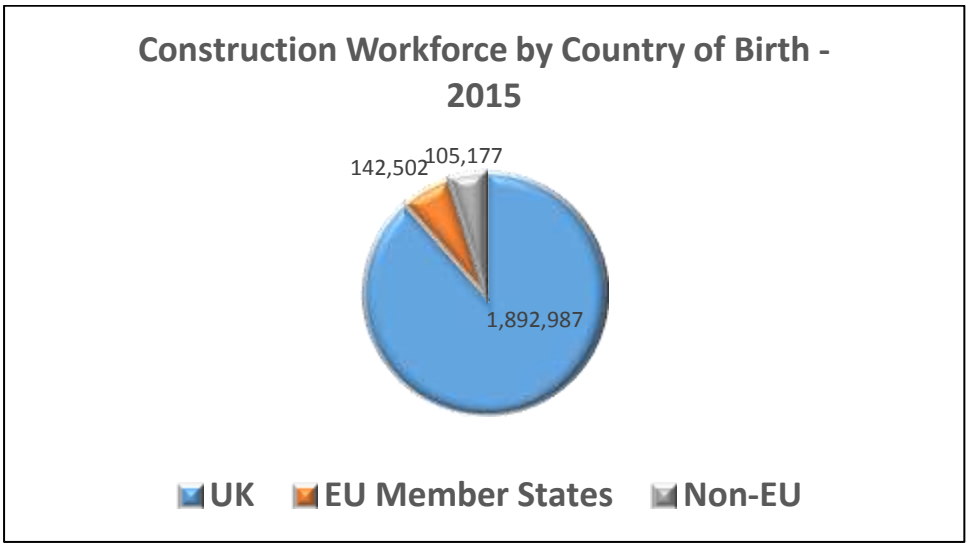


**Figure 2 – Source – BuildUK**

As can be seen, EU nationals contribute around 7% of the total workers employed in the construction industry. BuildUK (2016) argues that those employed from EU countries have helped in filling the skills shortage in recent times but that despite additional workers from the EU, the skills gap remains a significant problem. If the government pursues a policy of totally ending EU immigration, construction as an industry will have a significant issue in recruiting and developing the people it requires to ensure demand is met and additional growth can be achieved.

## *2.2 Future of Wage Costs*

Along with the above, rising costs, particularly rising wage costs that have been apparent in recent months, are a significant issue. This has been directly linked with the lack of supply within the construction labour market relative to the increases in demand for construction labour. Figure 3 illustrates the difference between Average Weekly Earnings within the construction industry and the Average Weekly Earnings for the whole economy.

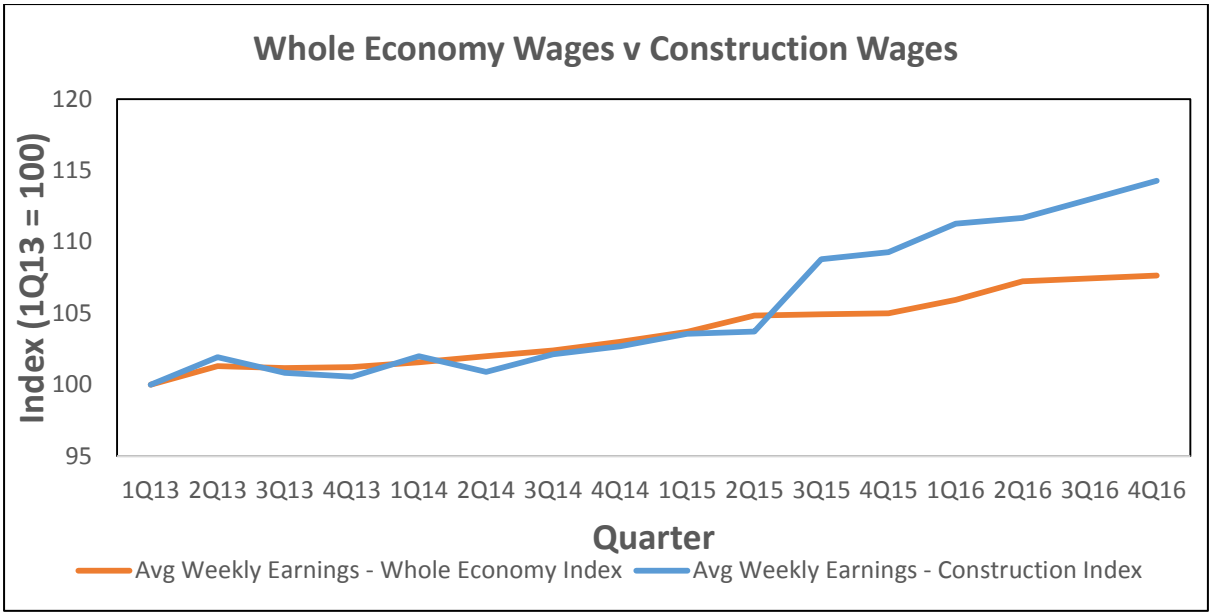


**Figure 3 - Source: ONS (Office for National Statistics)**

As can be seen in the above chart, since the first quarter of 2013 and by the end of 2016 construction wages had increased by over 14% in comparison with wages throughout the rest of the economy which had increased by just over 7%. Many commentators expect this trend to continue and bodies such as the Royal Institute of Chartered Surveyors and the Construction Industry Training Board discuss that construction wages are rising faster than national wages due to the skills shortage (CITB, 2016).

## *2.3 Future of Construction Costs*

The industry is also, due in part to the above wage inflation, seeing construction inflation rising at a higher rate than that of the general inflation rate. The Building Cost Information Service (BCIS) All-in Tender Price Index, which measures the cost of construction to the client, has experienced an increase of over 23% since the first quarter of 2013. When the general rate of inflation is taken as a comparison over the same period (CPI) which is 3.9%, we can see that construction as a service is experiencing inflation well over the national benchmark average rate. Figure 4 details the inflation experienced between the two measures.

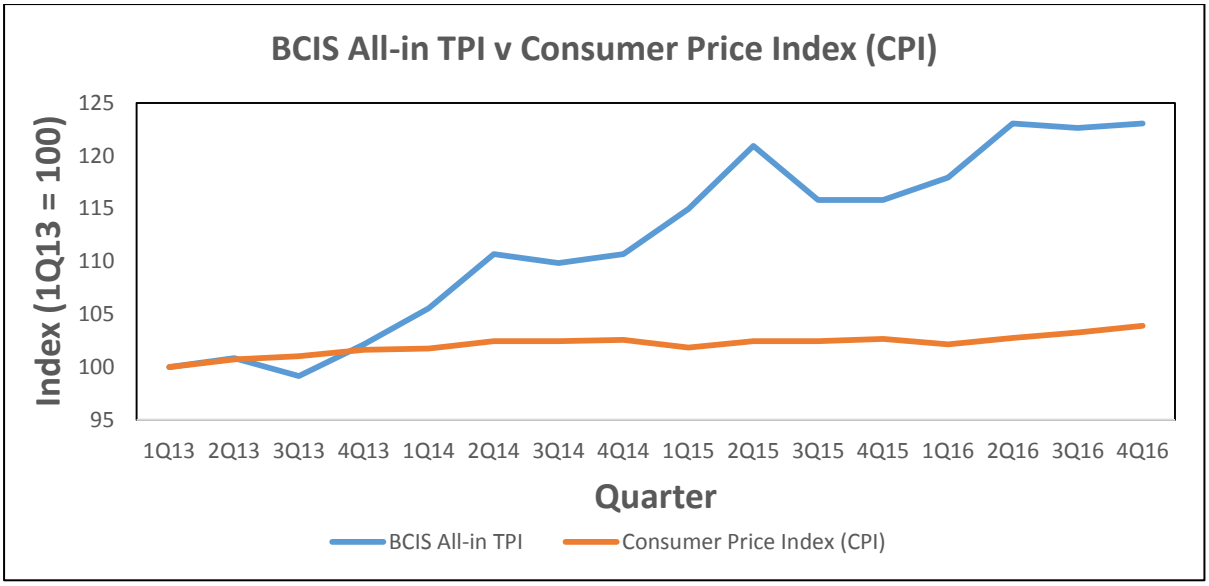


**Figure 4 – Source – BCIS (Building Cost Information Service) and ONS (Office for National Statistics)**

The RICS (2016) discusses that tender prices are increasing due to the ongoing surge in input costs and that unless addressed this would continue in its current trend. Labour is an input cost and is undoubtedly having an influence on the tender price index due to the ongoing shortages of labour and higher prices being paid to find suitable labour by contractors, these higher prices are then passed on to the client in order to protect the already slim margins contractors are operating on.

# 3 ADDRESSED THROUGH EDUCATION ALONE

The future of the industry from an educational perspective is currently looking bleak. Data available concerning higher education students enrolled on courses associated with the construction industry is showing declines even whilst the total number of students on all higher education courses is rising. The same trend is seen in first-year trainees in the construction industry.

## *3.1 Higher Education*

Figure 5 details the worrying trend in higher education for the construction industry against total higher education students in the UK.

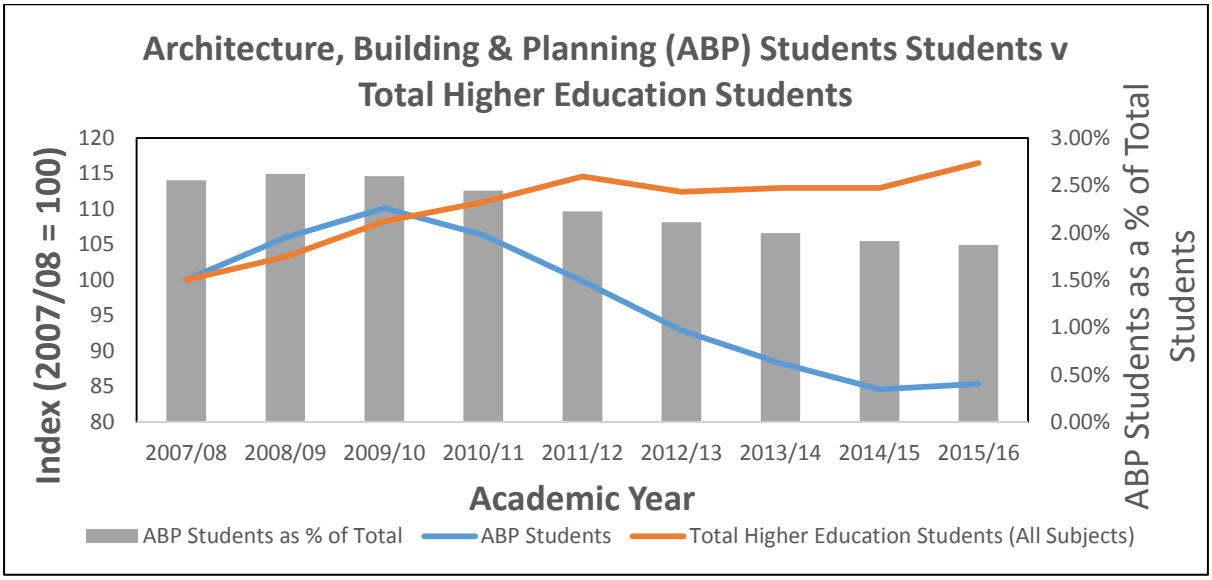


**Figure 5 - Source: HESA (Higher Education Statistics Agency) (Student enrolments on Higher Education Courses by level of study, subject area and mode of study)**

Since the academic year 2007/08 and up to the academic year 2015/16, total higher education numbers have increased by over 16% whilst Architecture, Building & Planning students have decreased by just under 15%. It is a worrying trend that despite a large increase in higher education students at UK institutions the number of students enrolled on courses related to construction has seen a steep decline.

Further to this, the grey bars indicate Architecture, Building & Planning students as a percentage of the total number of students; since the academic year 2007/08 this has gone from around 2.5% of the total to now being under 2%.

This is worrying data for our industry, higher education in its current form is clearly not giving the construction industry the skilled and professional staff that it needs to take the industry forward and meet the continued demand that is forecast for the industry.

## *3.2 Trades*

The problem of the number of students studying construction related courses is not just confined to higher education, there is also issues at the skilled trade level, specifically concerned with the number of first-year trainees entering the industry.

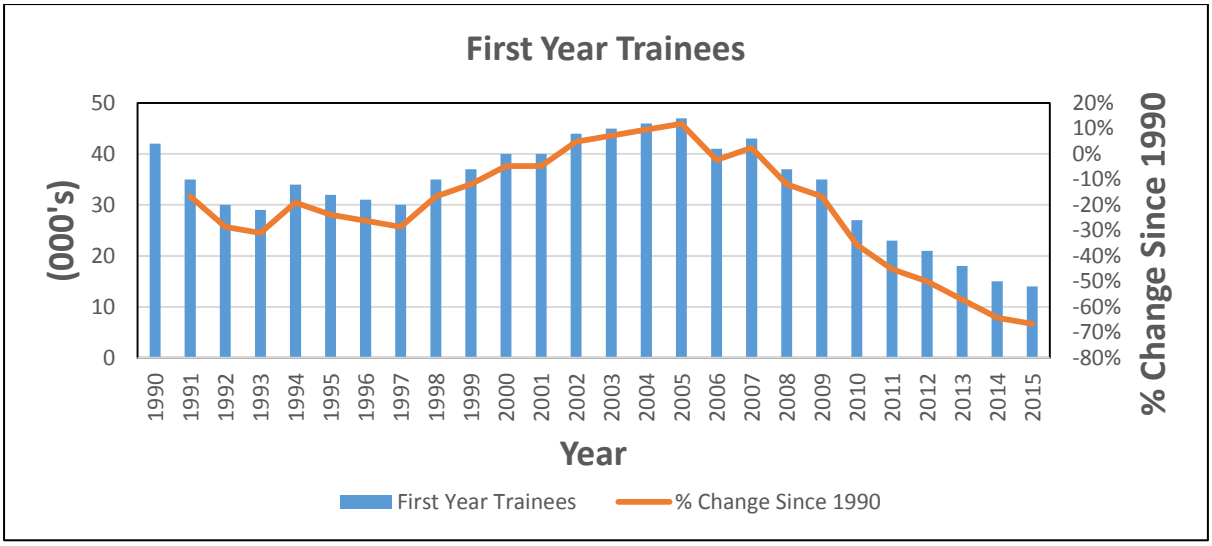


**Figure 6 - Source: CITB - Numbers of first-year trainees 1990-2015 (Great Britain: All occupations)**

As is the case with higher education entrants, figure 6 shows that first year trainee intake numbers are also experiencing a significant decline, especially since the recession in 2008.

I would argue that, having been a recent leaver from the UK education system, there are negative perceptions of the industry and perhaps these are partly to blame for the falling numbers of new entrants into the industry. Farmer (2016) also outlines his perception concerns and discusses that there is a public perception of poor job security, working conditions and health & safety; he argues that construction is ultimately perceived as a backward and insular industry.

As we can see from Figure 5 and Figure 6, the current role of education in providing the industry with new entrants if failing at an alarming rate; it is time to re-align the perceptions of the industry that the public has whilst also better engaging with the education sector at all levels and ages to show the positives that a career in construction can bring.

## *3.3 Vocational Education Vs University Education – Skills Mismatch*

The UK in recent times has had a drive to see more students attending university, I would argue that not only has this created a glut of graduates but it has also created a mismatch in skills across the economy. As has been discussed above, construction is in dire need of people with vocational skills.

Recent available data shows that under 20% of UK secondary education students are enrolled in vocational education programs; when compared with countries such as the Czech Republic and Austria who have over 70% we can see that there is a distinct problem (City & Guilds, 2015).

I believe that there is an argument that many EU nationals working in the UK, despite only making up 7% of the construction workforce, are filling the gaps around the vocational roles, the question for policy makers is what would happen to the supply of labour in our I industry if the inward flow of EU workers to construction came to an abrupt halt.

Further to this, it should be discussed that there is a stigma attached vocational education; progression to university is seen the best route to employment but recent data shows that

68% of young people plan to go to university but only 30% of future jobs will require a degree (City & Guilds, 2015). Furthermore, City & Guilds provided data that showed that just under 50% of recent graduates were working in non-graduate roles, this may suggest that their degrees were not the best education option to pursue.

I would suggest that this education model is both outdated and dangerous for the UK's young students; there is evidently a shortage of skills and participation in the vocational category but a glut of graduates leaving university to work in non-graduate roles, all of this shows a skills mismatch and successive governments have continued to advocate large numbers of young people into university even when data shows the end results are not beneficial to them or the wider economy. This form of education policy is failing our sector.

# 4 RECOMMENDATIONS

Education in its current form is not delivering the expanding workforce that construction needs and data shows that the number of people undertaking construction qualifications or apprenticeships is reducing at an alarming rate. Vocational courses are severely under-utilised and the number of people attending university and becoming part of the skills mismatch upon graduation is a cause for concern.

I believe that we must see additional ideas and schemes in conjunction with a reformed education model; government policy, taxation incentives, marketing investment and career change programmes are four areas which I view as being essential to the alleviating the skills shortage. There is no one-size-fits-all approach to rectifying the skills shortage, a broad range of measures should be considered.

## *4.1 Academic Reform*

Education as a standalone measure, at least in its current model, is not the overriding answer to the skills shortage as I have shown in this paper. I argue that a reformed education model is needed, there must be a concise re-think on the current national mindset that university education is the holy grail for young people to achieve; vocational qualifications should be pursued at a much greater level than is currently being seen.

## *4.2 Marketing Investment*

Firstly, our industry must have its image revamped and I believe young people currently working at all levels in the sector are the key to getting this message across. Companies in our industry should be encouraging their young staff to visit education institutions and provide students of all ages with the information that shows how diverse and challenging our industry is; perceptions are outdated and we must engage with students, parents and teachers in order to build a better image of construction.

Television and social media advertisements for teaching, mathematics, engineering and science are seen frequently but construction is not; the government should look to incorporate this into its strategies to address skills shortages. Use social media to network with young people and this may stimulate them to research careers in construction as well as provide a platform for early liaising between the industry and its future workforce.

## *4.3 Government Intervention*

Corporation tax reductions should be considered for companies taking on school leavers and sponsoring their higher education or apprenticeships. With the high costs of education, young people may be spurred to join construction if they can ‘earn whilst they learn’; the government should consider this as it may stimulate greater recruitment of young staff.

The government should also ensure that even when leaving the EU skilled workers can still access the UK labour market; 7% of our workforce are EU nationals, we cannot afford to shut the door on future labour from the EU. The government must deliver proper policy provisions to ensure sectors with in demand skills are not put at risk from the potential removal of free movement.

## *4.4 Other Industries*

Retraining for ex-military personnel should also be given greater encouragement; the CITB (2017) discuss that 14,000 leave the services each year, I would advocate that this is a great skills resource for companies to look to recruit from. I would like to see the government and the military work closely with those personnel who are soon to leave the services and express interests in our sector. The CITB are currently running BuildForce and the government should ensure that the CITB has the necessary resources it needs to maintain and grow this vital programme.

# 5 CONCLUSIONS

Construction is essential for an economy, if we want to continue to boost GDP and enhance our economy and society we need better buildings and infrastructure to meet the needs of our growing nation. If the skills shortage is not addressed, we will not only risk the long-term health of our industry but also that of meeting the needs of the economy and our society.

What is clear is that the current education model for developing future construction professionals is not working and this paper advocates a reformed education sector alongside a broad range of other measures that will stimulate and develop our future workforce.

# 6 REFERENCES

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