

# Boosting Routes into Industry Detailed Review Results

30 January 2024

**Authors:**

Graham Hasting-Evans, President of BACH and CE of NOCN Group. M.Sc C.Eng MICE FIC-CMC

# Contents

1. Summary
2. Workforce Profile
3. Carding Scheme Insight Profile
4. Current Routes into the Industry
5. Drivers for Future Routes into the Industry
6. Range of Routes Needed for the Future

## Note:

In terms of verifying an individual's skills and competency at a site level, the industry does not use physical qualification certificates. The practical verification mechanism is a CSCS logo'd card, with the individual's picture, which shows their occupational skills and competencies. Since 2019 the industry has been moving towards a position that, by 2025, all cards will be digitally SMART and hence present an easy check of all the individual's skills; in effect over time this will build up an electronic CV.

# 1. Summary

## Introduction

- The construction sector provides the critical infrastructure, housing and repair and maintenance to support the UK's economy and communities. Its output is over £216 billion per annum, and it provides around 8.8% of the UK's jobs. In respect of skilling the workforce it is supported by CITB (for the main part of the workforce), ECITB and the jointly governed carding scheme CSCS, with the Alliance Partners.
- It faces major skills gaps to match the demands of the economy; with the need for some 225,000 extra building and civil engineering workers by 2027 i.e. with replacements some 65,000 to 90,000 per annum. The ECITB reports a shortage of 25,000 by 2026. This is in the context of an aging workforce. Total across both footprints 250,000.
- As with other parts of the economy the sector is also going through major changes in the way it works with the greater use of digital technologies and the expansion of new SMART methods for constructing and maintaining the country's built environment. It is a priority that the industry has the competent and productive people it needs to meet the economy's requirements. Critical to the sector will be how it continually upskills the existing workforce to face these constantly changing challenges as well as how it recruits new entrants.
- The industry will be one of the major contributors to achieving the Net-Zero goals for the UK. Accordingly, over the next 5 to 10 years the whole of the workforce will need to be up-skilled for a Net-Zero economy. As well as being responsible for building the Net-Zero 'world', the other major strategic challenges are Building Safety Act compliance, increasing competency, digitisation and productivity improvement.
- Prior to 2012, there was a single set off occupational standards developed and maintained by the relevant Standard Setting Body; there being a slight variance for Scotland for their specific differing needs. However, the various reforms over the last 11 years has resulted in four divergent partially complete skills systems and occupational standards across the UK. Devolution of skills in the England sub-regions, which match the Local Skills Improvement Plan (LSIP) areas, is not uniform with different arrangements in different areas. This adds complexity for construction and particularly its SMEs.
- There was a single and similar training and apprenticeship levy for each of the CITB and ECITB footprints. In England there are now two levies and various devolved funding programmes. Differing funding mechanisms are in place in Northern Ireland, Scotland and Wales. Unfortunately, these governmental policy changes are making it more difficult for the industry to address the major challenges.
- To respond to the challenges construction needs a simple single skills system that is flexible, dynamic and agile. This will be critical to achieving the major priority of upskilling existing personnel competency for Net-Zero, digitisation and productivity improvement.

# 1. Summary (contd.)

## The Workforce and recruitment

- Construction provides around 8.8% of UK jobs. There are 2.26 million (ONS, 2020) in mainly building and civil engineering, excluding those in the supply chain, parts of related engineering and the new emerging roles in off-site manufacturing. In terms of the ONS data, some 56% are operational trades and craft at level 3 and below. Of the total workforce 24.1% are level 2 and 19.6% are level 1 and below (i.e. labourers); this is a combined total of 43.7%. Professional, technical and managerial roles are 33.4% of the workforce with 11.0% of the total being at level 4-5 and 16.0% at level 6 and above. The remainder are admin, support and sales roles. In addition to the 2.26 million, there are some 0.35 million in construction engineering occupations and around 0.7 million in the supply chain. This makes a total of around 3.3 million. Within this we have a high proportion of “labour only”, self-employed people, specialist skills and foreign workers.
- With such a broad support to the country and its economy, the range of operational trades, craft, professional, technical and managerial roles is wide and complex, including the needs of the major industry verticals:
  - Construction (e.g. domestic and commercial building, construction management, design, surveying and planning);
  - Civil engineering construction and infrastructure (e.g. including coastal protection, flood elevation, roads, rail, air, power, structures, telecoms, and water utilities);
  - Building services engineering (e.g. including mechanical, electrical and electronic engineering);
  - Specialist skills (e.g. such as sustainability, retrofit, building safety and controls, fire protection, geotechnical and tunnelling);
  - Off-site manufacturing (e.g. housing modular construction, pre-cast concrete for infrastructure and steel frames); and
  - Supplies such as construction products, minerals and aggregates, timber, building supplies, cement, concrete, steel, glass etc..
- An effective construction skills system must support the varying requirements across these verticals e.g. the requirements for electricians is different to that of the building or civil engineering trades. Manufacturing and supplies requirements are further variations as are professional roles.
- Recruitment and progression has developed over-time and has traditionally been agile and flexible; allowing people to progress easily. Many in the sector present to schools, attend job fairs, support recruitment hubs (Talentview Construction, National Apprenticeship Hub, IfATE Occupational Maps and Go Construct) and other interventions to try to bring in sufficient people. On major projects such as London 2012, HS2 and Hinkley Point procurement has been used to support training programmes. Employers are also flexible and use a wide range of diverse routes into employment. Despite all this good effort construction has been seen as one of the sectors for those who are not successful or attracted to academic based careers. This has resulted in an unattractive image in some peoples’ eyes; despite the fact that jobs are well paid and have great career prospects. Many parents and schools do not see construction as a go to career.

# 1. Summary (contd.)



## Review Approach

- This report looks at the routes used by the construction industry to recruit into jobs to see how changes in these could help improve both the flow of people into the sector as well as the overall level of competency in the workforce. We look at the routes for both new entrants, including young people entering work for the first time as well those who are progressing up the ladder in the industry.
- As some 92% of the workforce live in England or on the borders and work between their home country and England, we have mainly focused on the policy context in England. That said we have received comments on the UK wide situation which we have taken into account in our findings and recommendations.
- The policy context we have referenced is the Westminster Parliament's Department for Education's programme for England. This consists of the Institute for Apprenticeships and Technical Education's (IfATE) controlled occupations and maps, Apprenticeship Levy, planned reform and streamlining of level 3 and 2 vocational qualifications and their funding, introduction of HTQs and the use of traineeship and bootcamps, as well as the traditional university routes for professional, technical and managerial roles. In England there is also an evolving process of devolution to local areas with Local Improvement Skills Plans (LSIPs) and new innovative approaches being developed by the various Mayoral Combined Authorities.
- The approach to this review has consisted of:
  - An on-line survey covering the existing routes being used, which these companies want to continue with, any new routes being suggested and whether there are changes needed were needed. The results represent the views of 1101 organisations from across the various verticals, including major as well as and smaller employers;
  - A detailed analysis of the 'insight' data held by ONS and CSCS plus two major partner carding schemes (CPCS and CISRS). Note the analysis does not include building services engineering data;
  - A review of individual submissions received; and
  - A review of the findings from the debate on this matter at the CCATF Conference on 4 July 2023 in Sheffield, which included inputs from employers, supply chain, training providers and the Trade Union representation.
- It should be noted that the review was undertaken prior to the Government's announcement on introducing Advanced British Standards (ABS) to replace A and T Levels by 2033. Although the timescales for ABS will mean that the sector will not benefit in the critical next 10 years.

# 1. Summary (contd.)

## Key Findings

- The key findings are:

### **Operational trades and craft occupations:**

- The employers make extensive use of a wide range of mechanisms including the three main routes of apprenticeships, NVQs and labourer entry. Other routes include traineeships as well as bootcamps for adults, but quality is variable. Industry see the T-Level route as one aimed at level 4 and above jobs, or level 3 apprenticeships. This is reflected in the low number of achievements, for example 59 in 2022/23 for the on-site course, some of which we understand went on level 4 site supervisor occupations.
- In terms of the future, the industry wishes to maintain all the existing routes, with apprenticeships, NVQs and labourer entry remaining the main routes they wish to use, with potentially some bootcamps where these can match industry set competence standards.
- Retaining and funding the level 2 and 3 NVQs are therefore critical to being able to maintain the workforce at the level, whilst we update and improve vocational qualifications.
- ONS data shows in construction (building and civils), there are some 442,000 people with either a level 1 or no qualification. The carding strategic insight data shows we have issued over 789,000 labourer cards in total. This issue needs more detailed study in order to clear interventions to transition people to full competency. That said clearly the proportion of people with a labourer card needs to reduce.
- Employers would like to see continuous updating and improvements to all routes.

### **Professional, technical and managerial occupations:**

- The employers mainly use higher and degree apprenticeships, the traditional academic university courses and NVQs (level 4 and above); the later predominantly for progression within the workforce. The growth of degree apprentices in the last few years is generally seen as positive, with this route replacing universities academic courses as the main approach.
- There could be limited use of bootcamps where these can match industry set competence standards.
- T Levels are likely to become more important for the level 4 and above jobs if the curriculum is updated to address the key strategic challenges and also focused on professional, technical and managerial roles.
- HTQs are new and not widely understood. Hence only 21.80% of respondents say they would consider recognising them for people entering the sector and 21.44% would use them for upskilling.
- As above employers would like to see improvements to all routes.

### **Other routes:**

- The industry is open to utilise other routes that are developed or hybrid approaches for all operational trades, craft, professional, technical and managerial occupations. Some 99% of responders in the survey said that they would support alternative entry routes. Employers are open to other routes such as an agreed form of “competency assessments/OSAT/experienced worker assessment (EWA)” for example the progression of people with a labourer’s card or for a small number of young people entering with a T Level. EWA is already well established in parts of building services engineering and lessons can be learnt from this experience.

# 1. Summary (contd.)

## Key Findings (contd.)

### Upgrading Vocational Qualifications (VQs):

- The industry understands how critically important maintaining NVQs are at present until such a time as these can be upgraded to match the challenges of the Building Safety Act compliance, Net-Zero, digitisation and improving productivity.
- There is considerable support for change over a manageable timescale. Some 82.47% of employers say they would use a new generation of VQs if they were modularised and could be used for upskilling as well as first time-entry. For professional, technical and managerial roles some 82.29% of employers say they would use a new generation of Level 4 and above VQs if they were modularised and could also be used for upskilling as well as CPD. Modularise provision must comply with industry set competence requirements.

### Occupations:

- Whilst welcoming IfATE's occupational maps, there is no longer a single UK wide list of defined occupations in construction either for now or the future e.g. IfATE's list differs from CITB's and there are differing lists in the devolved administrations. Without that agreed list it is difficult to design common core standards and then to communicate and 'sell' a coherent view to people why someone should work in construction. Specialist skills as well as some new green skills are particularly missing at present.

### Skills Systems:

- In 2022, prior to the reforms, there was one skills system for construction. That changed after 2013 and the employers find the different systems and approaches in the four parts of the UK, as well as devolved parts of England, confusing and add to the problems of recruitment and progression. These four systems are not seen as adequately supporting the industry's highest priority which is up-skilling the existing workforce to ensure competency and face the challenges of the Building Safety Act compliance, Net-Zero, digitisation and improving productivity. The complicated skills systems are also thought to be a factor in the disengagement of SMEs.
- The present arrangements do not readily allow the full integration of the carding competency requirements nor facilitate in all cases easy integration with professional entry examinations.
- There is also concern over the high-level of drop-outs in vocational qualifications and apprenticeships.

# 1. Summary (contd.)

## Key Findings (contd.)

- The present skills system does not cater for SMEs nor the high numbers of self-employed people, specialist skills and foreign workers.

### **Funding and Levies:**

- The industry has been supported since the 1960's by the CITB and ECITB training and apprenticeship levies. These have helped SMEs as well as the larger employers to improve safety, skills and competency. Government's introduction of the Apprenticeship Levy (for larger employers) means there are now three levies in England.
- The present arrangement of three levies and the bureaucracy that comes with these complicated arrangements is seen as off-putting and a contributor to the fall off in SME engagement and the decline in number of level 2 apprenticeships. There is concern that this will become more of a barrier with devolution in England.
- In addition to the complexity, there is insufficient investment available to match the demands of the major strategic challenges - Building Safety Act compliance, Net-Zero, digitisation and productivity improvement.
- Funding rates have not increased substantially since the introduction of the Apprenticeship Levy, but inflation has risen dramatically. There are now significant problems with the delivery of occupations which require a large proportion of materials which cannot be re-used e.g. civils, plastering and plumbing.
- The streamlining of level 2 funding being undertaken by DfE, including the consideration of the future to NVQs, is raising concerns that there will be a decrease in funding from 2025 and that this will have a negative impact on trying to move people from labourer cards to full level 2 competency. This will hold back the industry's ability to increase the levels of competence in the operational workforce.



# 1. Summary (contd.)

## Analysis from carding insight data

- Key findings in respect of the carding schemes are:
  - **Integration with the Skills Systems:** The four divergent partially complete skills systems and occupational standards across the UK are not fully integrated with the competency carding arrangements with CSCS and the Alliance Partners nor professional pathways.
  - **Proportion of the workforce that is carded:** Some 81% of the workforce (excluding the suppliers' personnel) are carded. The main types of activity where the workforce is not carded is in the domestic market, design offices and administrative roles.
  - **Proportion of trainee cards:** Only 3.1% hold trainee cards and only 1.7% an apprenticeship card. The main factors for low numbers are only a small proportion of people entry the industry through apprenticeships; most come through some form of vocational qualification currently NVQs. A number of people are level 2 academically qualified, but not vocationally competent and a small number of apprentices hold a labourer card instead of apprentice or trainee card. CSCS are aiming to correct this by offering a free apprentice card.
  - **Proportion of labourers:** There is a historical high proportion 37.2% of people (across all 38 schemes) that just hold a labourer card; equivalent to level 1 qualification. This reflects the fact that for certain occupations generally within the building and civil engineering/infrastructure verticals a common route is to come into the sector at this entry point and then progress through on-site learning and experience. There is also some foreign workers on labourer cards.. The industry has been working hard to reduce the number of people with a labourer's card and in 2023 the number issued was down to 33%. There is concern that the DfE streamlining of level 2 and potential reduction in funding will reverse this improvement; making matters worse.
  - **Proportion at Level 2 and below:** Some 64% of the carded workforce in the building and civil engineering/infrastructure verticals are at level 2 or below. This demonstrates how critical this Level is to the industry's ability to deliver the outcomes on Net-Zero, digitation and productivity improvement needed by the economy.
  - **Workforce Stratification:** The carded workforce is stratified into two major blocks; one at level 3 and below and the other at level 6 and above. This is more extreme than we see in the ONS data and adds to the concern over the lack of sufficient progression pathways between level 3 and level 6.
  - **Aged Workforce:** The profile is of considerable concern as the carded workforce is aging and there are limited numbers of new people becoming carded
  - **Comparators to Industrywide & ONS measurements:** The profiling of carded workforce skill levels to ONS (DfE Funded training) and CITB Skills Demand Strategy illustrates level of carded workforce after funded training and over/under supply of manual occupations.

## 2. Workforce Profile



- The section is drawn from the ONS 'construction' data for construction supplemented with data on the construction engineering data. ONS's 'construction' data set covers personnel who are carded and non-carded. However, this data does not include all occupations involved in construction such as the various engineering and manufacturing categories and the suppliers such as builders' merchants, timber and aggregate suppliers etc..
- Based on the ONS data, some 56% are operational trades and craft at level 3 and below, including specialist skills (figures are for building and civils). Of the total workforce 24.1% are level 2 and 19.6% are level 1 and below (i.e. labourers); this is a total of 43.7%. Professional, technical and managerial roles are 33.4% of the workforce with 11.0% of the total being at level 4-5 and 16.0% at level 6 and above. The remainder are admin, support and sales roles. In addition, there are some 0.35 million in construction engineering occupations and around 0.7 million in the supply chain. This makes a total of around 3.3 million.
- ONS's construction data is presented in two forms. One is on 'educational' qualification Levels and the other in on the type of occupation. Charts 2.1 and 2.2 over page present the high-level view of this data. The following panel shows the main occupations in construction from ONS date.
- The construction industry has a large number of people employed in labour only sub-contractors or as self-employed. The Labour Force Survey shows there was an average of 698,000 self-employed construction workers in Great Britain in 2021. These will be mainly in the operational trades and craft part of the workforce. Clearly the skills system and funding needs to cater for this type of workforce. There is also a significant number of foreign workers in the sector.
- We have skills gaps for some 225,000 extra construction workers by 2027; which with replacements means between 65,000 and 90,000 people per annum. In this context there are considerable difficulties with recruitment. In addition, there is major challenge that over the next 5 to 10 years the whole of the workforce will need to be up-skilled for a Net-Zero economy. As well as Net-Zero, the other major strategic challenges are Building Safety Act compliance, increasing competency, digitisation and productivity improvement. Many would say that the challenge of upskilling the existing workforce is the most urgent priority. Construction could then utilise the upskilling training content and experience to update the longer governmental programmes as and when these are reviewed and update.
- From differing data sources, we can start to map skills gaps and by improving our understand of the requirements at detailed level, see comparison panel CITB and CSCS as an example.

## 2. Workforce Profile (contd.)

Chart 2.1: Educational Levels [ONS, 2020]

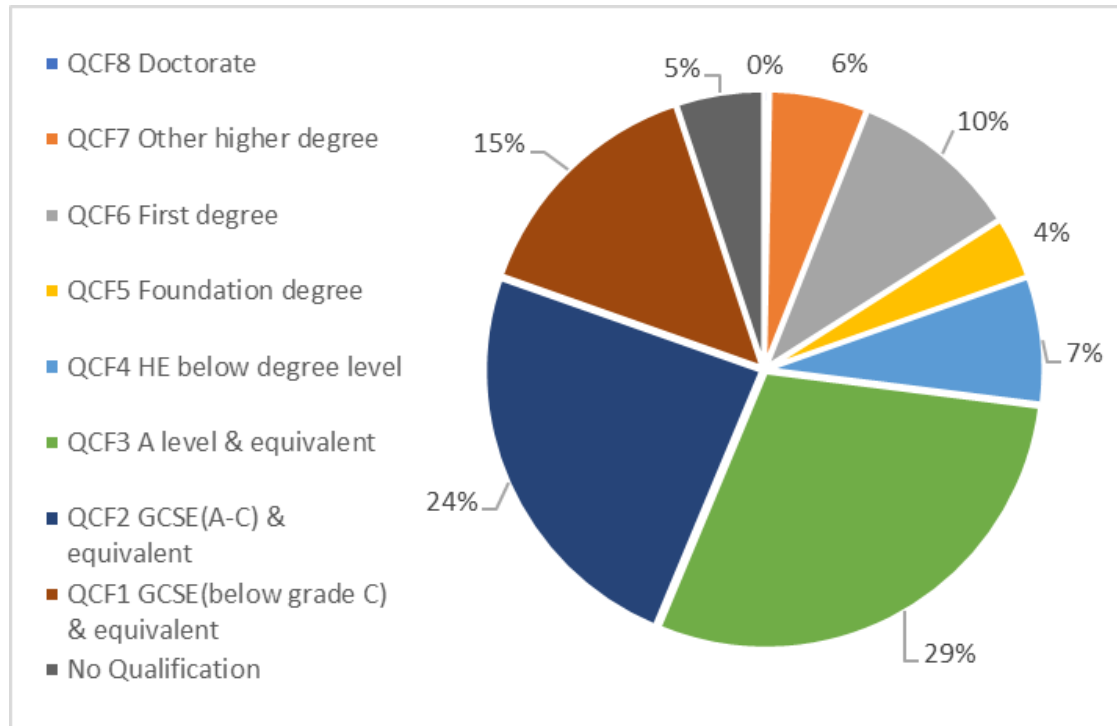
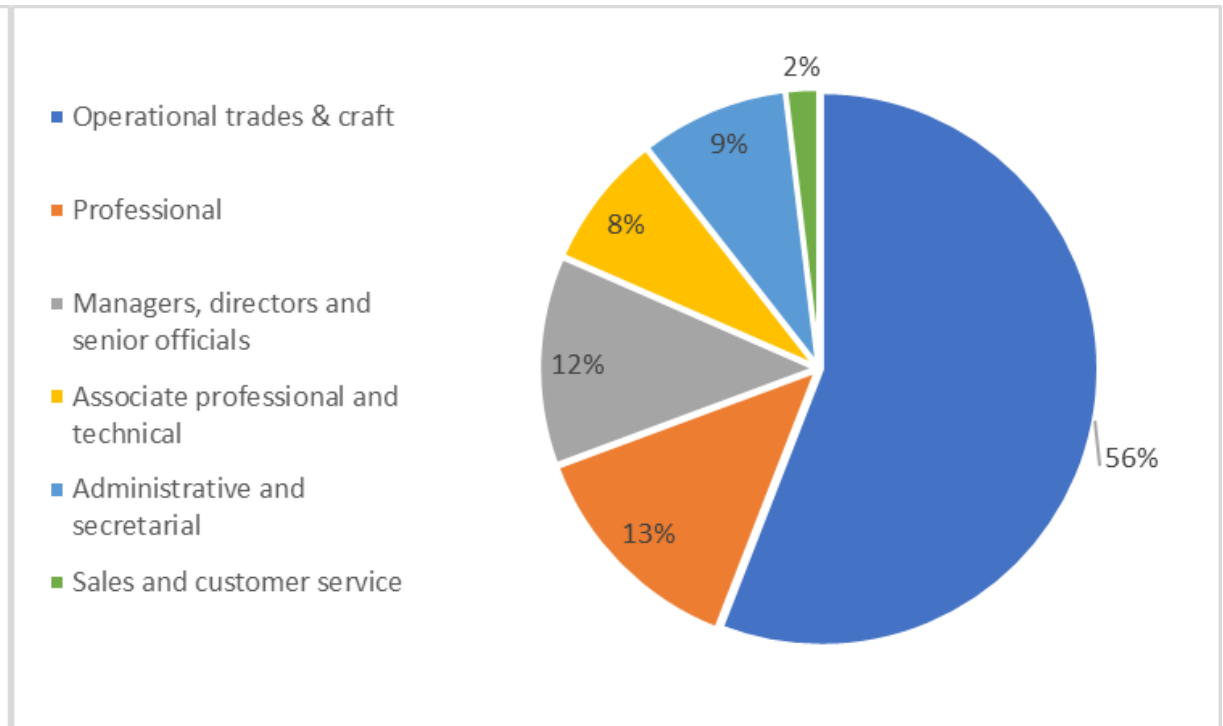


Chart 2.2: Occupation Type [ONS, 2020]



## 2. Workforce Profile (contd.)

### Operational Trade & Craft Main Occupations (ONS)

Labourers  
Construction Plant Operatives  
Electricians and Electrical Fitters  
Carpenters and Joiners  
Plumbers and Heating & Ventilations Engineers  
Construction/Highways/Groundworker Operatives  
Painters and Decorators  
Bricklayers and Masons  
Glaziers, Window Fabricators and Fitters  
Plasters  
Roofers, Roof Tilers and Slaters  
Floorers and Wall Tilers  
Concrete trades (incl. formwork and steelfixing)  
Scaffolders, Stagers and Riggers

### Professional & Technical Main Occupations (ONS)

Civil Engineers  
Mechanical Engineers  
Quantity Surveyors  
Electrical Engineers  
Electrical and Electronic Technicians  
Architectural and Town Planning Technicians  
Architects  
Building and Civil Engineering Technicians

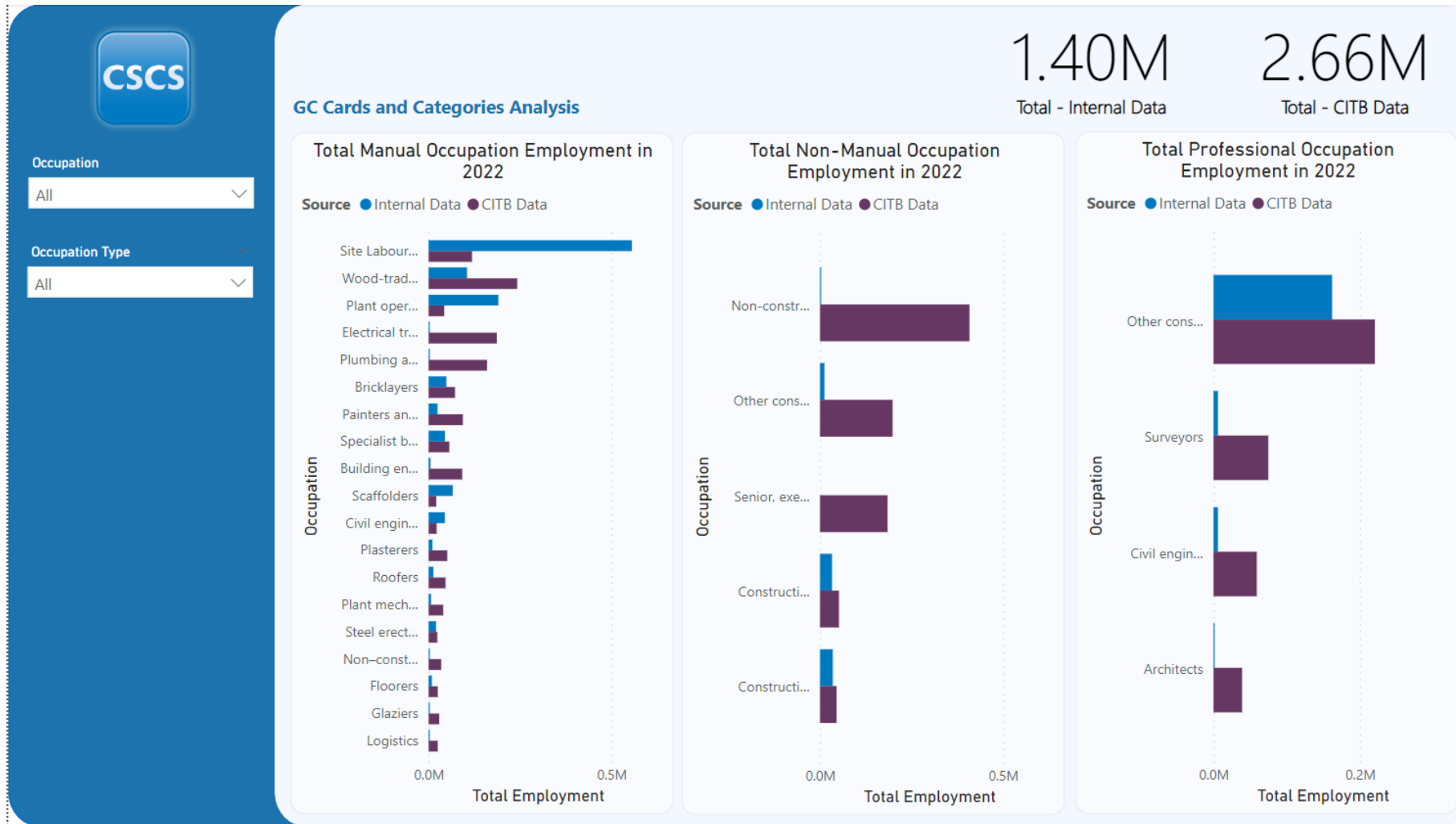
First occupation on each list is the largest with the rest listed in descending order.  
Excludes activities such as suppliers, aggregates, minerals and off-site manufacturing

## 2. Workforce Profile (contd.)

- The specialist sector of industry is significant, but not easily identified in governmental statistics. Accordingly, to date these occupations have suffered a lack of formal training facilities and funding. The CITB levy currently helps with the funding of specialist apprenticeships that are not recognised by IfATE. Many come into the specialist occupations informally and are trained on the job. An example of this is in roofing.
- Many working in the specialist trades use the labourer cards route because the delivery of qualifications for them are not commercially viable. Therefore, a question is should the industry consider for example an additional red card category ‘trained operative’ which could also be given to people with level 2 training qualification, but not yet achieved a full competency apprenticeship of qualification. This would allow us to identify people who are labourers with just a level 1 or no qualification.
- A further factor is people from other countries entering the workforce. CITB report “Workforce Mobility and Skills in the UK Construction Sector 2022” says one in six construction workers (17%) originate from another country and this proportion increases to over 1 in 2 (59%) in London. This is significant and it is unclear as to whether they are carrying out the role they are competent at because of the current carding/qualification requirements.
- Around 1 in 5 (18%) construction workers worked in another sector before starting work in construction, and among this group the sectors worked in beforehand are most likely to be the wholesale and retail sector (20%), followed by accommodation, which has seen an uplift since 2018/19 (12% compared to 2%), and manufacturing, which has seen a downturn since 2018/19 (11% compared to 45%). In terms of the job roles that construction workers previously held in other sectors, the highest proportion were in skilled trade occupations and elementary administration and service occupations (both 22%), with the latter showing a significant uplift since 2018/19 (2%).
- Just over a third (35%) of all construction workers have worked in more than one construction trade or occupation whilst working in the construction industry. This is not surprising as in activities such as maintenance there is a greater need for multi-skilling.
- One in five (19%) workers believe they would benefit from some form of training in basic skills including digital skills. There has also been an increase in the proportion who feel they would benefit from training in reading, from 5% in 2018/19 to 9% in 2022, and in the proportion who feel they would benefit from training in speaking English, from 6% to 9%.

# 2. Workforce Profile (contd.)

## CSCS vs CITB Skills Demand 2022

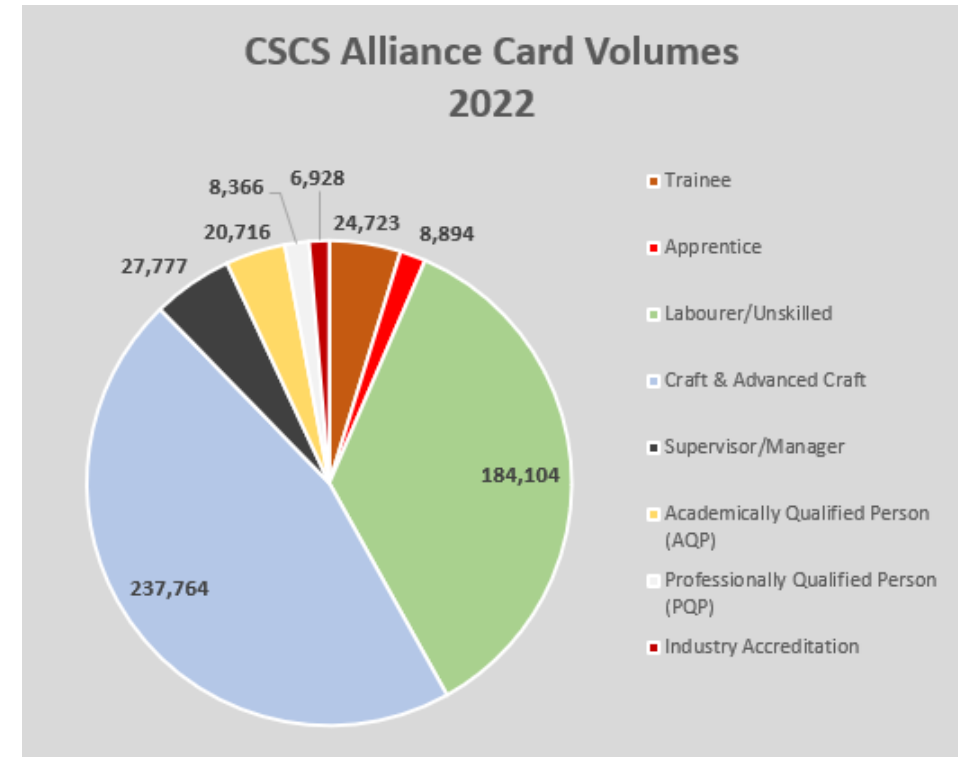
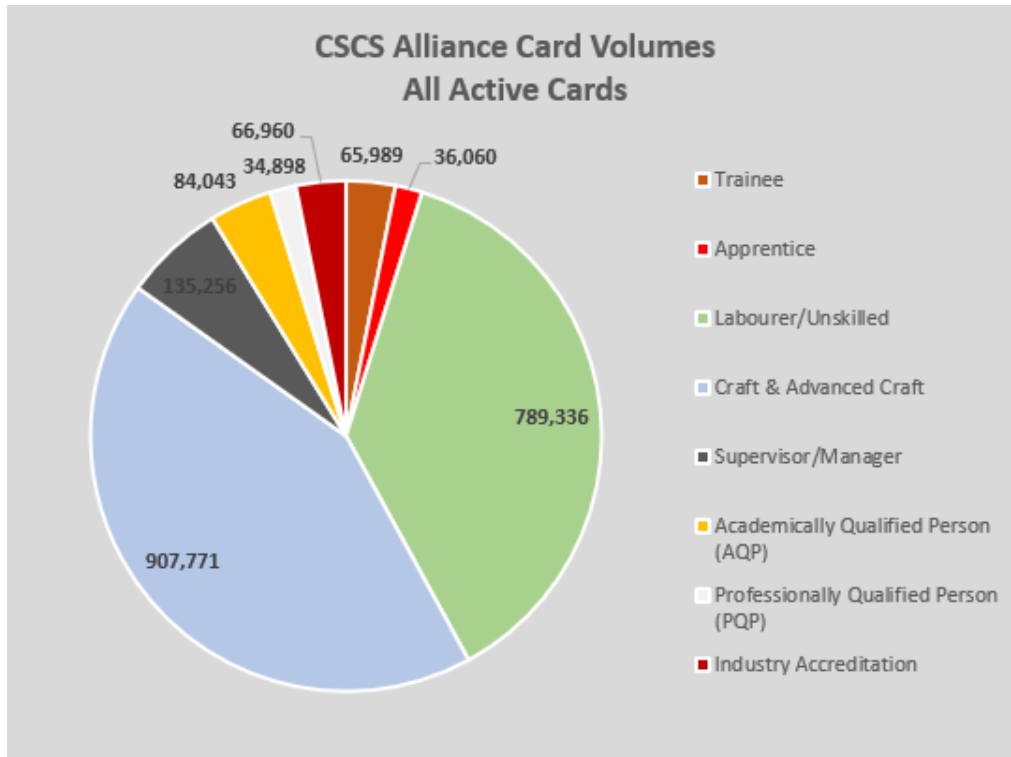


Illustrative data mapping of 3/38 CSCS card schemes to CITB Occupational Skills Demand analysis.

(Data in development)  
Source: CSCS

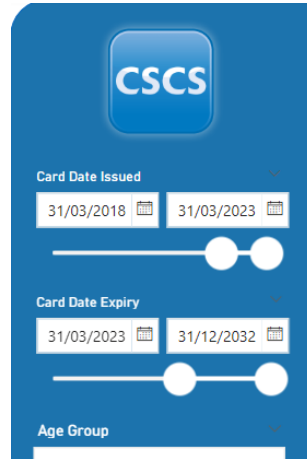
### 3. Carding Scheme Insight Profile

- CSCS license the use of its Certification Mark to 37 additional cards schemes to offer a card solution to meet the whole requirement for the industry. The 38 schemes in total is known as the CSCS Alliance.
- 3 Alliance partners CSCS (Core Construction) , CISRS (Scaffolding) and CSPS (Plant) have piloted a combined dataset in order to respond to recent consultations and start to test the benefits of being able to produce strategic insight data.
- The total number of active cards in circulation across the CSCS Alliance (all 38 schemes) is 2.11 million cards, 519k cards were issued in 2022. Card breakdowns are illustrated below:



# 3. Carding Scheme Insight Profile (contd.)

- The headline information from the combined pilot dataset for the three schemes is:
  - 1.38m of 2.11m cards are in 3 pilot schemes (66%)
  - 69% of card holders are level 1 & 2
  - 39% of carded workforce hold labourer cards, which is slightly higher than the 37.1% for the total of the 38 schemes
  - Less than 200k of workforce are under 30



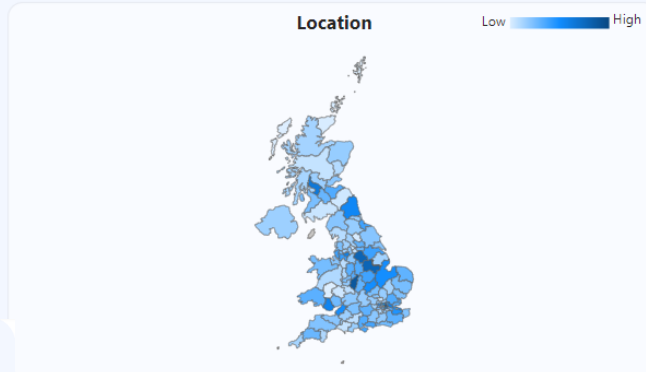
**CSCS**

Card Date Issued: 31/03/2018 to 31/03/2023

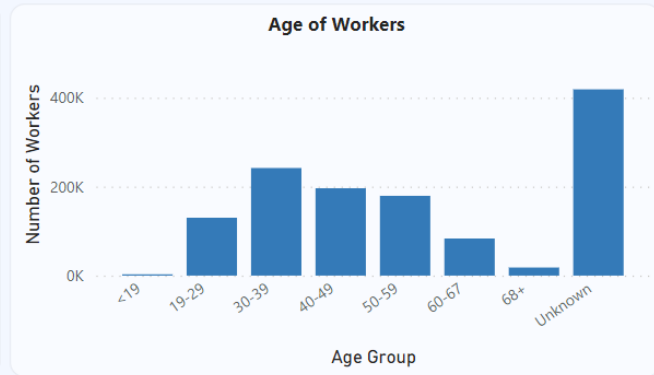
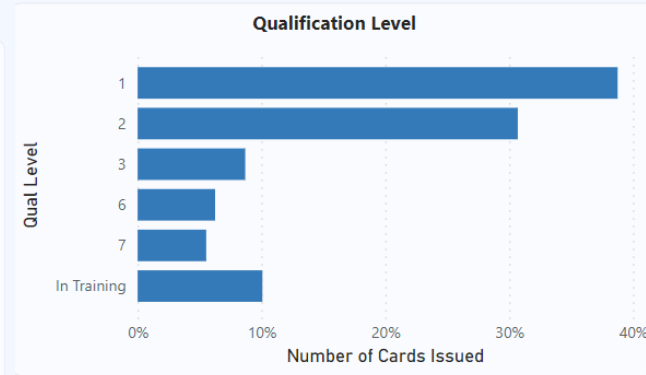
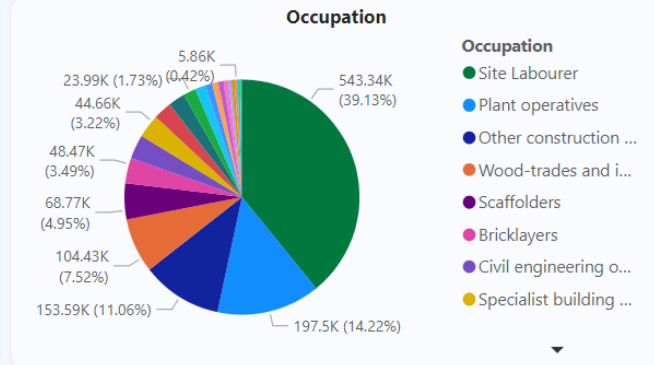
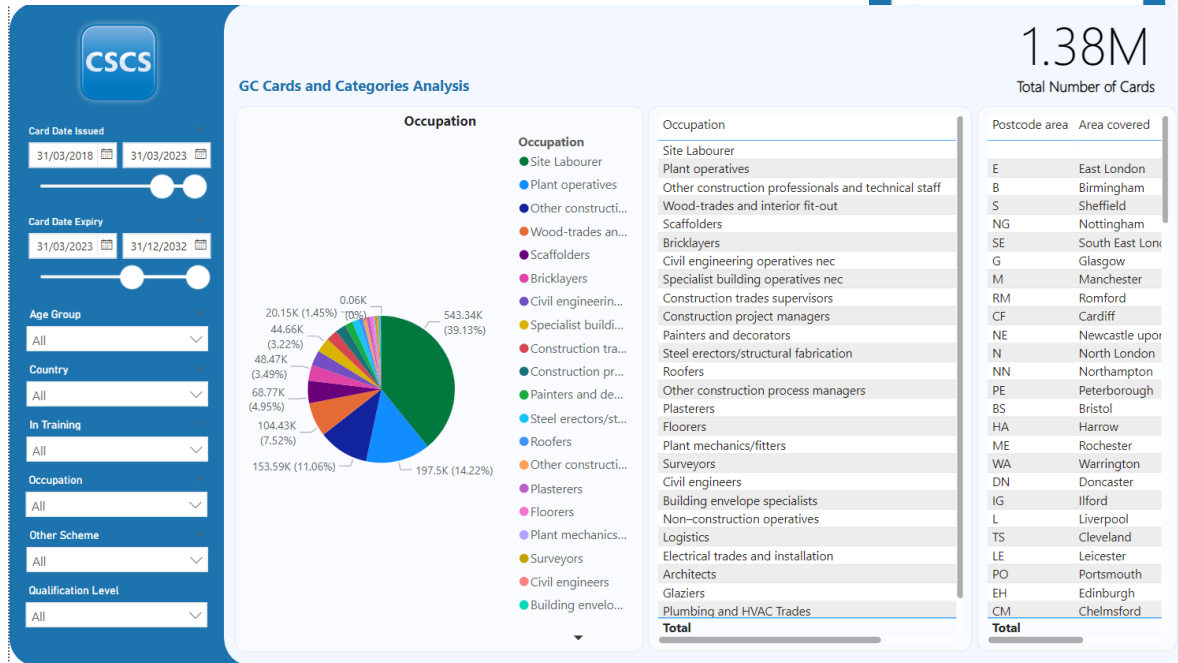
Card Date Expiry: 31/03/2023 to 31/12/2032

Age Group

GC Cards and Categories Analysis



1.38M  
Total Number of Cards

**CSCS**

GC Cards and Categories Analysis

Card Date Issued: 31/03/2018 to 31/03/2023

Card Date Expiry: 31/03/2023 to 31/12/2032

Age Group: All

Country: All

In Training: All

Occupation: All

Other Scheme: All

Qualification Level: All

1.38M  
Total Number of Cards

Occupation

| Occupation   | Count        | Percentage |
|--|--------------|------------|
| Site Labourer  | 543.34K      | 39.13%     |
| Plant operatives                                     | 197.5K       | 14.22%     |
| Other construction professionals and technical staff | 153.59K      | 11.06%     |
| Wood-trades and interior fit-out                     | 104.43K      | 7.52%      |
| Scaffolders  | 68.77K       | 4.95%      |
| Bricklayers  | 48.47K       | 3.49%      |
| Civil engineering operatives nec                     | 44.66K       | 3.22%      |
| Specialist building operatives nec                   | 23.99K       | 1.73%      |
| Construction trades supervisors                      | 5.86K        | 0.42%      |
| Construction project managers                        | 0.06K        | 0.00%      |
| Painters and decorators                              | 0.00K        | 0.00%      |
| Steel erectors/structural fabrication                | 0.00K        | 0.00%      |
| Roofers  | 0.00K        | 0.00%      |
| Other construction process managers                  | 0.00K        | 0.00%      |
| Plasterers   | 0.00K        | 0.00%      |
| Floors   | 0.00K        | 0.00%      |
| Floorers   | 0.00K        | 0.00%      |
| Plant mechanics/fitters                              | 0.00K        | 0.00%      |
| Surveyors  | 0.00K        | 0.00%      |
| Civil engineers                                      | 0.00K        | 0.00%      |
| Building envelope specialists                        | 0.00K        | 0.00%      |
| Non-construction operatives                          | 0.00K        | 0.00%      |
| Logistics  | 0.00K        | 0.00%      |
| Electrical trades and installation                   | 0.00K        | 0.00%      |
| Architects   | 0.00K        | 0.00%      |
| Glaziers   | 0.00K        | 0.00%      |
| Plumbing and HVAC Trades                             | 0.00K        | 0.00%      |
| <b>Total</b>   | <b>1.38M</b> |            |

Postcode area Area covered

| Postcode area | Area covered        |
|---------------|---------------------|
| E             | East London         |
| B             | Birmingham          |
| S             | Sheffield           |
| NG            | Nottingham          |
| SE            | South East London   |
| G             | Glasgow             |
| M             | Manchester          |
| RM            | Romford             |
| CF            | Cardiff             |
| NE            | Newcastle upon Tyne |
| N             | North London        |
| NN            | Northampton         |
| PE            | Peterborough        |
| BS            | Bristol             |
| HA            | Harrow              |
| ME            | Rochester           |
| WA            | Warrington          |
| DN            | Doncaster           |
| IG            | Ilford              |
| L             | Liverpool           |
| TS            | Cleveland           |
| LE            | Leicester           |
| PO            | Portsmouth          |
| EH            | Edinburgh           |
| CM            | Chelmsford          |
| <b>Total</b>  |                     |





Cross-industry  
Construction  
Apprenticeship  
Task Force



# 3. Carding Scheme Insight Profile (contd.)

- The number of card holders in training or apprenticeships in the sample is 89k compared to 102k (87%) of all Card schemes.
- The volume of publicly funded qualifications (ONS) who become carded has declined since covid and only 1:3 of level 3 have become carded.

Card Date Issued: 31/03/2018 to 31/03/2023

Card Date Expiry: 31/03/2023 to 30/03/2028

Age Group: All

**GC Cards and Categories Analysis**

Location: Low to High

Occupation:

- Plant operatives: 47.43K (53.46%)
- Other construction professionals and technical staff: 11.69K (13.18%)
- Other construction professionals and technical staff: 6.68K (7.53%)
- Wood-trades and interior fit-out: 5.61K (6.32%)
- Bricklayers: 3.28K (3.7%)
- Civil engineering operatives nec: 2.96K (3.33%)
- Specialist building operatives nec: 2.04K (2.29%)
- Surveyors: 1.09K (1.22%)
- Construction project managers: 0.03K (0.03%)

**88.71K**  
Total Number of Cards

Card Date Issued: 01/01/2000 to 18/07/2023

Card Date Expiry: 31/01/2010 to 31/08/2032

Age Group: All

Country: All

In Training: All

Occupation: All

Other Scheme: All

Qualification Level: Multiple selections

**GC Cards and Categories Analysis**

\*Assumed government qualification start date is equal to the scheme card issued date

**1.11M**  
Total Number of Cards

**% of qualified people that gained a scheme card**

Qualification Level: 1 (Green), 2 (Blue), 3 (Brown)

**Vocational Government Qualification Data**

Qualification Level: 1 (Green), 2 (Blue), 3 (Brown)

**Scheme Qualification Data**

Qualification Level: 1 (Green), 2 (Blue), 3 (Brown)

**In Training**

Trainee: 71.44K (80.53%)

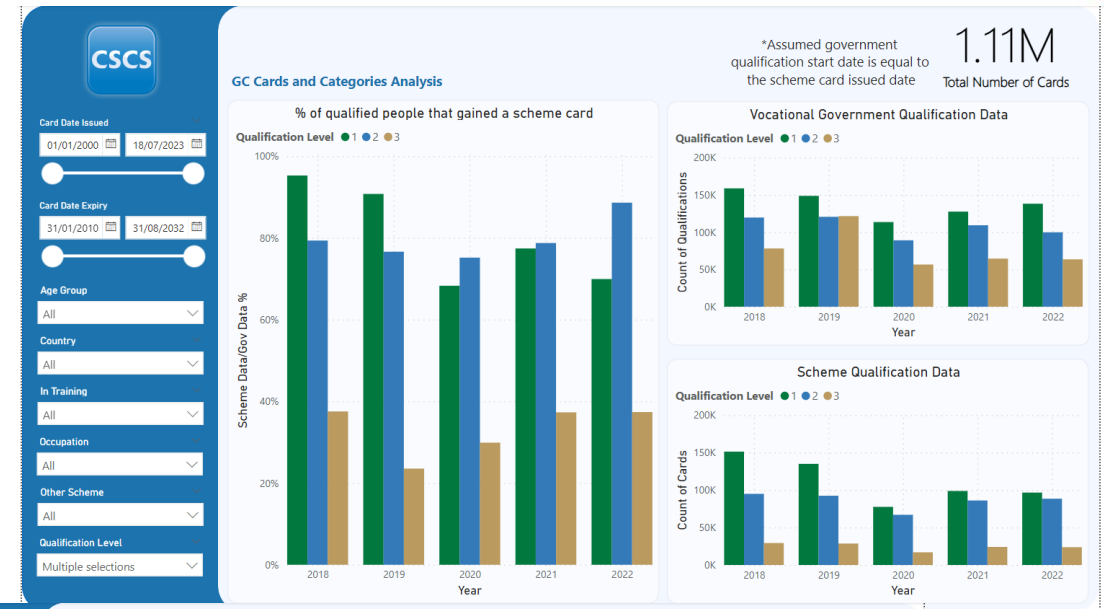
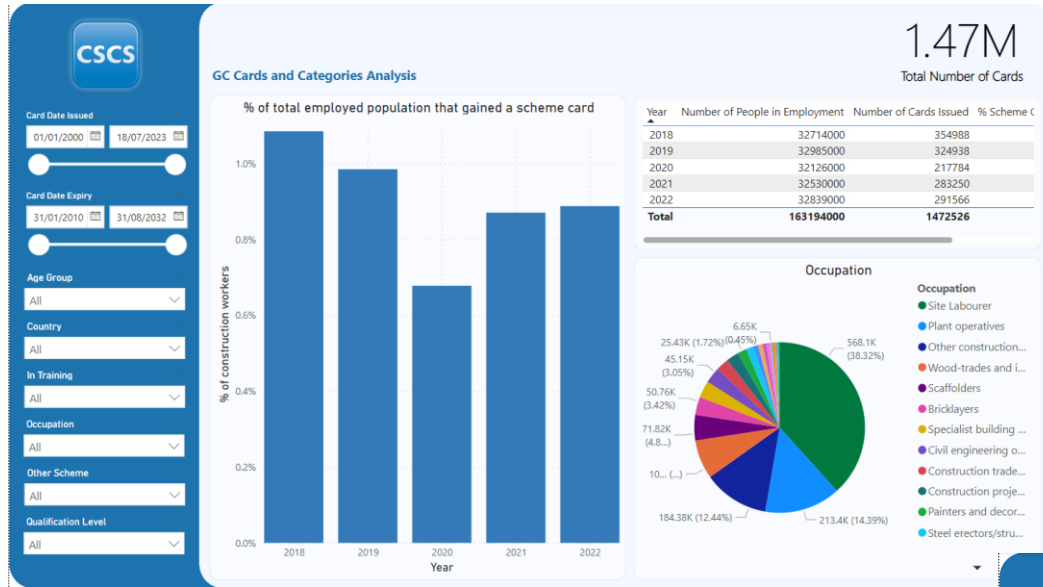
Apprentice: 14.27K (16.08%)

Experienced: 0.03K (0.03%)

- Plant operatives
- Other construction professionals and technical staff
- Scaffolders
- Wood-trades and interior fit-out
- Bricklayers
- Civil engineering operatives nec
- Specialist building operatives nec
- Surveyors
- Construction trades supervisors
- Construction project managers
- Total**

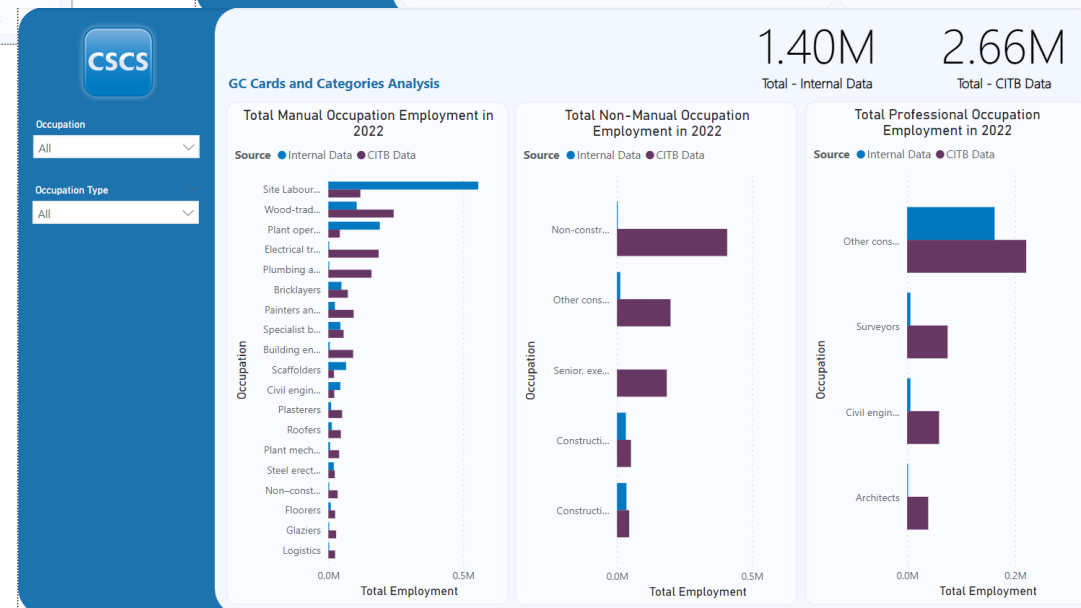
17

# 3. Carding Scheme Insight Profile



The combined Big Data sets would enable industry to have greater comparative data with the following existing Data Sets as illustrated in the three graphics:

- ONS
- DfE Funding
- CITB Skills & Occupations – Demand analysis



## 4. Current Routes into Industry

- In respect of the operational trades and craft workforce the current main routes for initial entry are:
  - **Apprenticeships:** The proportion of the workforce undertaking an apprenticeship can vary considerably e.g. high proportion of master building craft and electricians will enter by an apprenticeship, whilst civil engineering and plant operatives would mainly enter by an NVQ. Again, resulting in the issuing of a CSCS card when fully qualified. For the building and civil engineering footprint in recent years only 15-20% of people entered the industry as a result of successfully completing an apprenticeship. There is around 50% drop-out rate on apprenticeships.
  - **NVQs:** A high proportion of the overall workforce enter the industry and get a competency card at level 2 or above through the traditional NVQ route to a CSCS card.
  - **Labouring:** A significant number of people enter the industry as a labourer, some having completed a full-time level 2 training qualification at a college or training provider that doesn't meet competency requirements and either remain at this level or start to progress through on-site or at times off-site training. The later would usually be through an NVQ route to a CSCS card.
  - **Traineeships/Bootcamps:** At present a small number of people come through a traineeship (18-24 year olds) or a bootcamp (adults 25 years and over). They then become labourers or progress via either an apprenticeship or an NVQ route to a CSCS Card. There have been issues of quality and consistency in the use of this approach.
- Progression within the operational trades and craft workforce would be labourers moving up into level 2 occupations, level 2 occupations progressing, where there is a progression route, to level 3 or more commonly into front-line supervisor roles. There is a long successful history for people being able to progress from the operational trades and craft jobs into site supervision, site management and ultimately strategic company management.
- Chart 4.2 provides the survey responses from employers (mainly large and medium sized) on which routes they use.

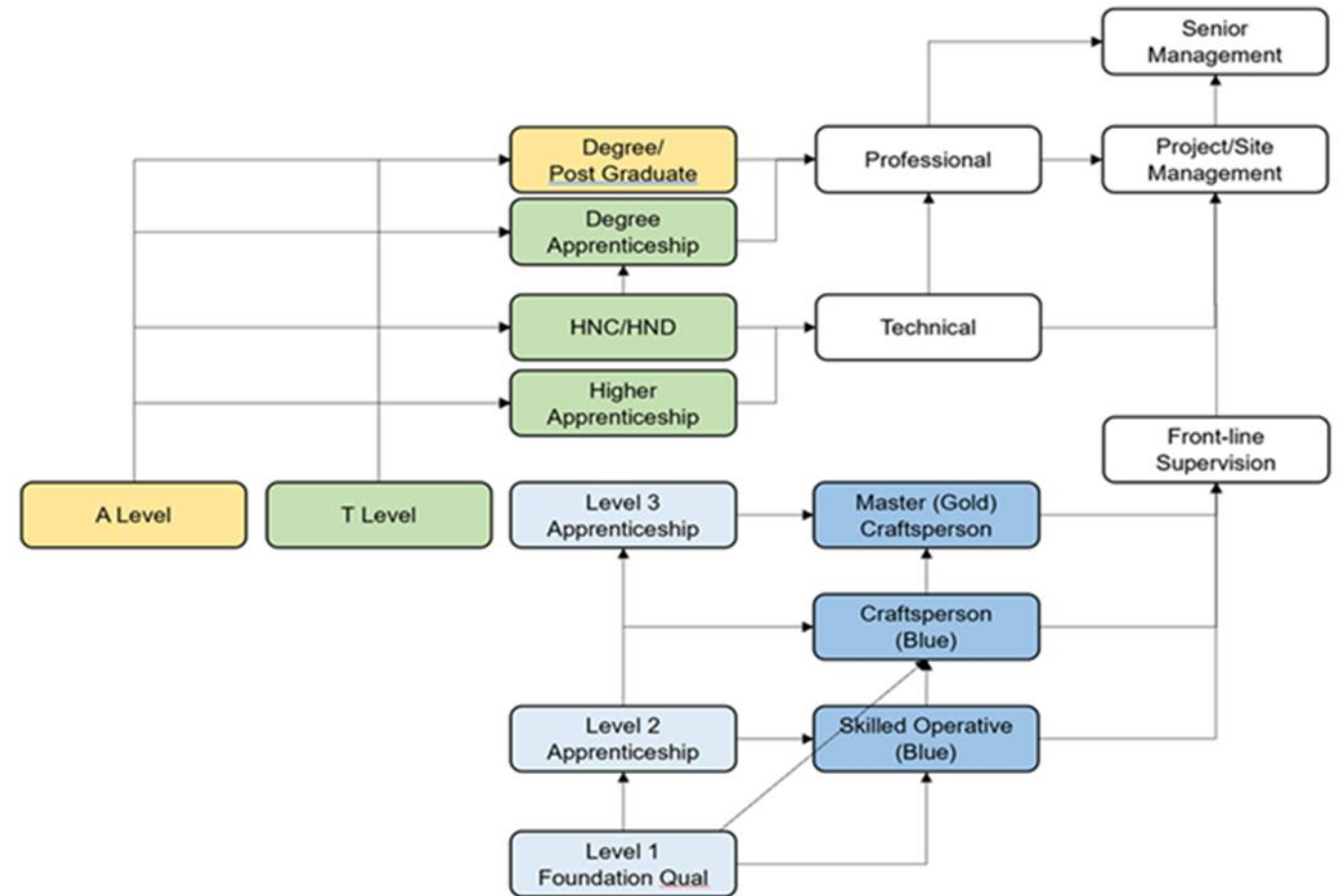
## 4. Current Routes into Industry

- There are long established career pathways, (see Figure 4.1) to which a range of higher and degree apprenticeships have been added in England, as well as more recently three T Levels to support entry of young people (16 to 19 years old) into the sector:
  - Design, Survey & Planning;
  - On-site (building trades); and
  - Building Services Engineering.
- However, these are still in their infancy in terms of being introduced as we can see from the achievement data for their first two years, given below.
- What we note is that the Design, Survey & Planning T Level is starting to show positive results. However, the Building Services Engineering and Onsite Construction T Levels have very low levels of achievement, which affirms the view of many in industry that these T Levels will not be a significant contributor to the industry's operational trades and craft skills gaps. It should be noted that the on-site T Level only cover 4 of the well over 100 occupations, so will inevitably be of limited benefit. The occupations covered are building; there is no coverage for civils.

| Achieved at least pass         | 202122     | 202223     | Grand Total |
|--------------------------------|------------|------------|-------------|
| Building Services Engineering  |            | 177        | 177         |
| Design, Surveying and Planning | 194        | 422        | 616         |
| Onsite Construction            |            | 59         | 59          |
| <b>Grand Total</b>             | <b>194</b> | <b>658</b> | <b>852</b>  |

## Figure 4.1: Main Entry and Progression Routes into Industry

- This diagram summarises the main entry and progression routes in the industry.
- These go from some-one entering the industry as a labourer – Level 1 or non-qualifications up to the professional, technical and managerial roles at typically Level 5 – 7
- The industry has a long history of progressing people from the entry levels, up through ‘trades’ (levels 2 and 3), into predominantly technical and managerial jobs.
- This is a very positive aspect of the way the industry develops people and the capacity and capability of the workforce.
- It is crucial that we can maintain and enhance the routes into and progression pathways in the sector,
- This needs to be embodied into governmental policy. Which is not the present position.

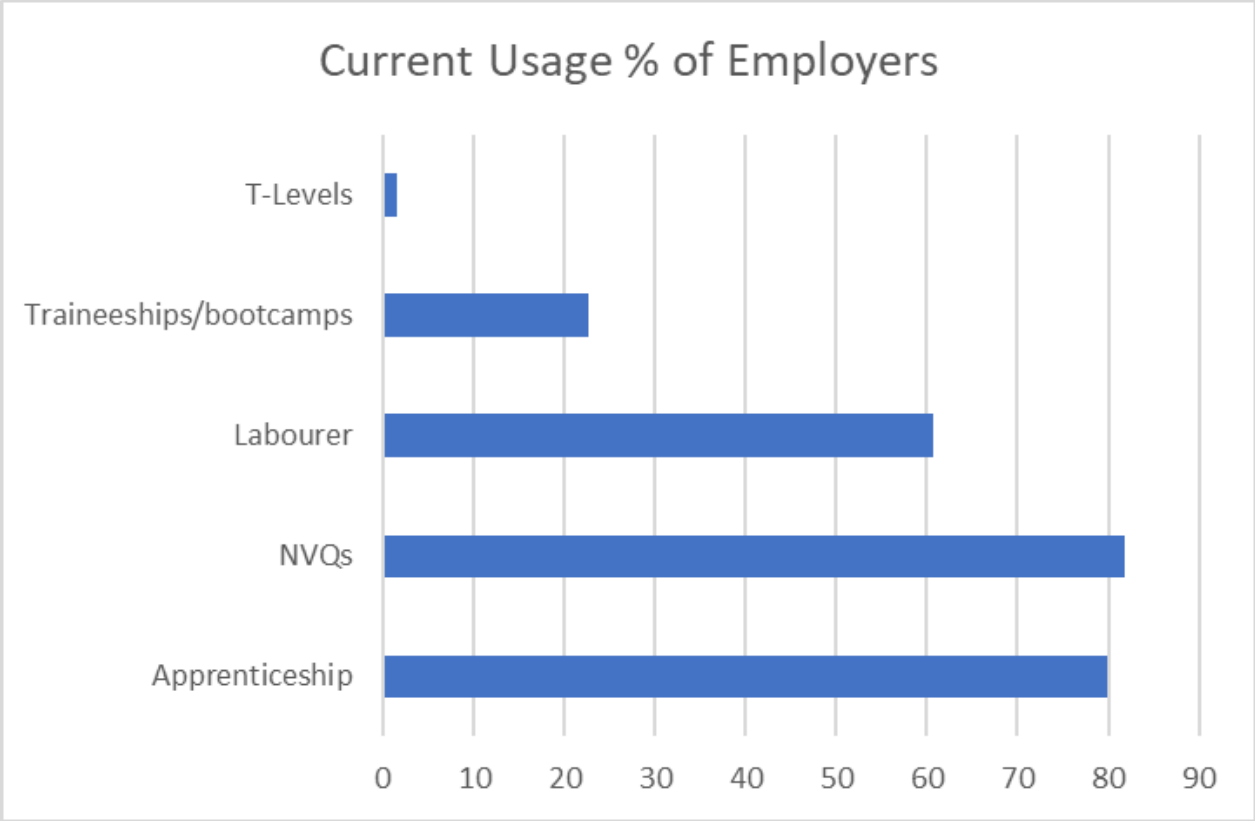




# Chart 4.2: Routes used - percentage of respondents

## Operational trade and craft workforce

- The three highest routes surveyed employers currently use for bringing people into the operational trade and craft workforce are:
  - Apprenticeships (79.93%)
  - NVQs (81.74%)
  - Labourer (62.85%)
- It should be noted that although a large number of employers who responded to the survey use apprenticeships the actual total number of apprentices completing is less than the numbers of people coming through the NVQ route.
- Traineeships and bootcamps are used by 22.62% of employers who responded, which potentially reflects the concerns over quality.
- T Levels are only currently used by 1.5% of respondents. This fits with the low numbers of enrolment in FE Colleges.
- Some 82.47% of employers say they would use a new generation of VQs if they were modularised and could be used for recruitment, progression and upskilling.
- 99% of employers said that they would support alternative entry pathways into apprenticeships.



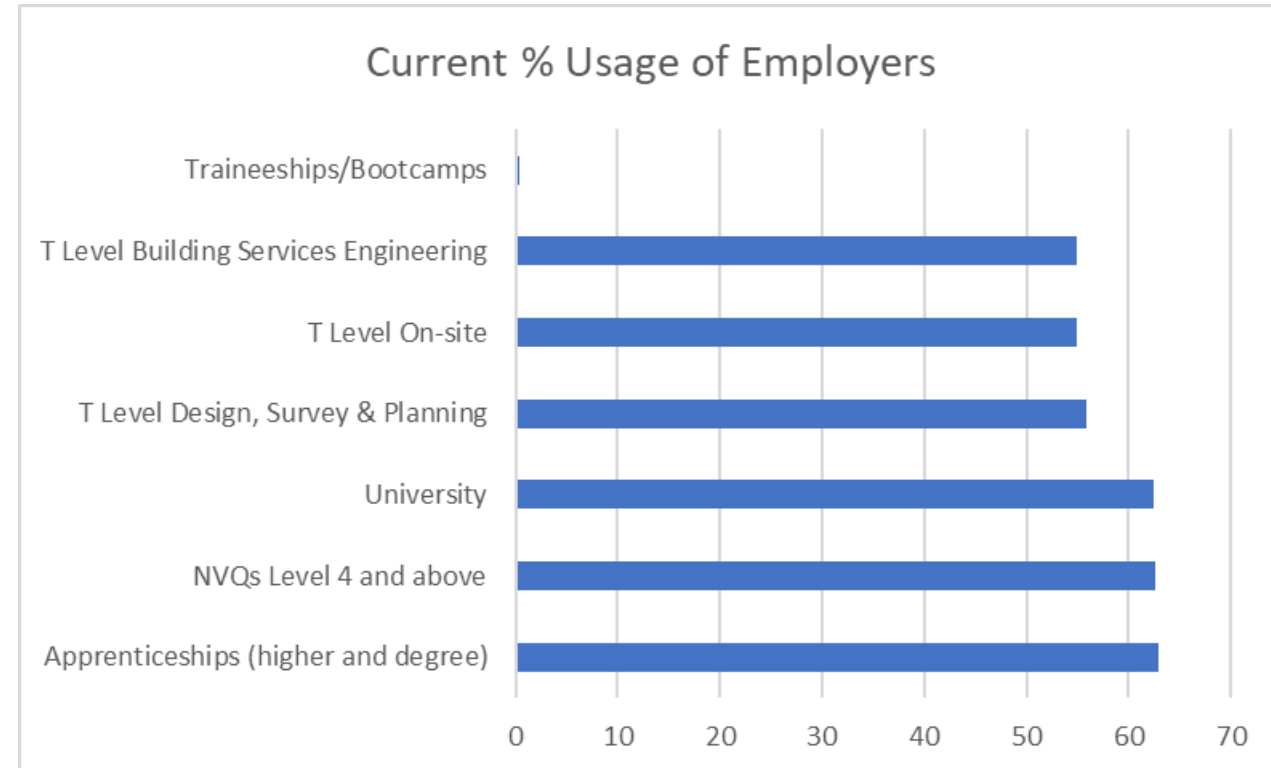
## 4. Current Routes into Industry (contd.)

- In respect of the professional, technical and managerial workforce the current main routes for initial entry are:
  - **Higher/Degree Apprenticeships:** This is becoming used as a route for people entering predominantly the professional and technical occupations. Entry into degree apprenticeship courses has been mainly through A Levels, but small numbers are starting to come through the new T Level route, principally the Design, Survey & Planning T level.
  - **NVQs:** A proportion of the overall workforce overall enter the industry through the traditional NVQ route (level 4 to 6) to a CSCS card. This route is also used for progression as mentioned above.
  - **Universities/HE:** The traditional entry route into the professions has been a university degree or post graduate degree to gain access to employment programmes resulting in professional status. A similar route is in place through higher education institutions for the ‘technical and associate professional’ roles.
- In addition, people progress via training and additional NVQs from the operational trades and craft workforce into site management. People also progress from professional and technical roles, through training and experience into managerial occupations.
- It is common that people enter the industry with a core knowledge then develop their competency and specialism through training, CPD and experience e.g.:
  - Architect develops a specialism in housing or commercial premises or leisure facilities;
  - Civil Engineer develops a specialism in highways or rail or structures or water utilities;
  - Electrical Engineer develops a specialism in power generation, HV or utilities or housing or commercial premises.
- Chart 4.3 provides the survey responses from employers (mainly large and medium sized) on which routes they use.

# Chart 4.3: Routes used - percentage of respondents

## Professional, technical and managerial workforce

- The three highest routes employers who responded currently use for bringing people into the professional, technical and managerial workforce are:
  - Apprenticeships (62.85%)
  - NVQs level 4 and above (62.58%)
  - University (62.40%)
- Higher or degree apprenticeships have clearly taken over from the traditional academic university route.
- Traineeships and bootcamps are used by 0.45% of employers; again, reflecting concerns over quality.
- T Levels are currently used for progression into level 4 and above apprenticeships, higher education or employment.
- HTQs are in the process of being introduced and not well understood.
- Some 82.29% of employers say they would use a new generation of level 4 and above VQs if they were modularised and could be used for recruitment and upskilling.
- 99% of employers said that they would support alternative entry pathways into apprenticeships.





# 5. Drivers for Future Routes into the Industry



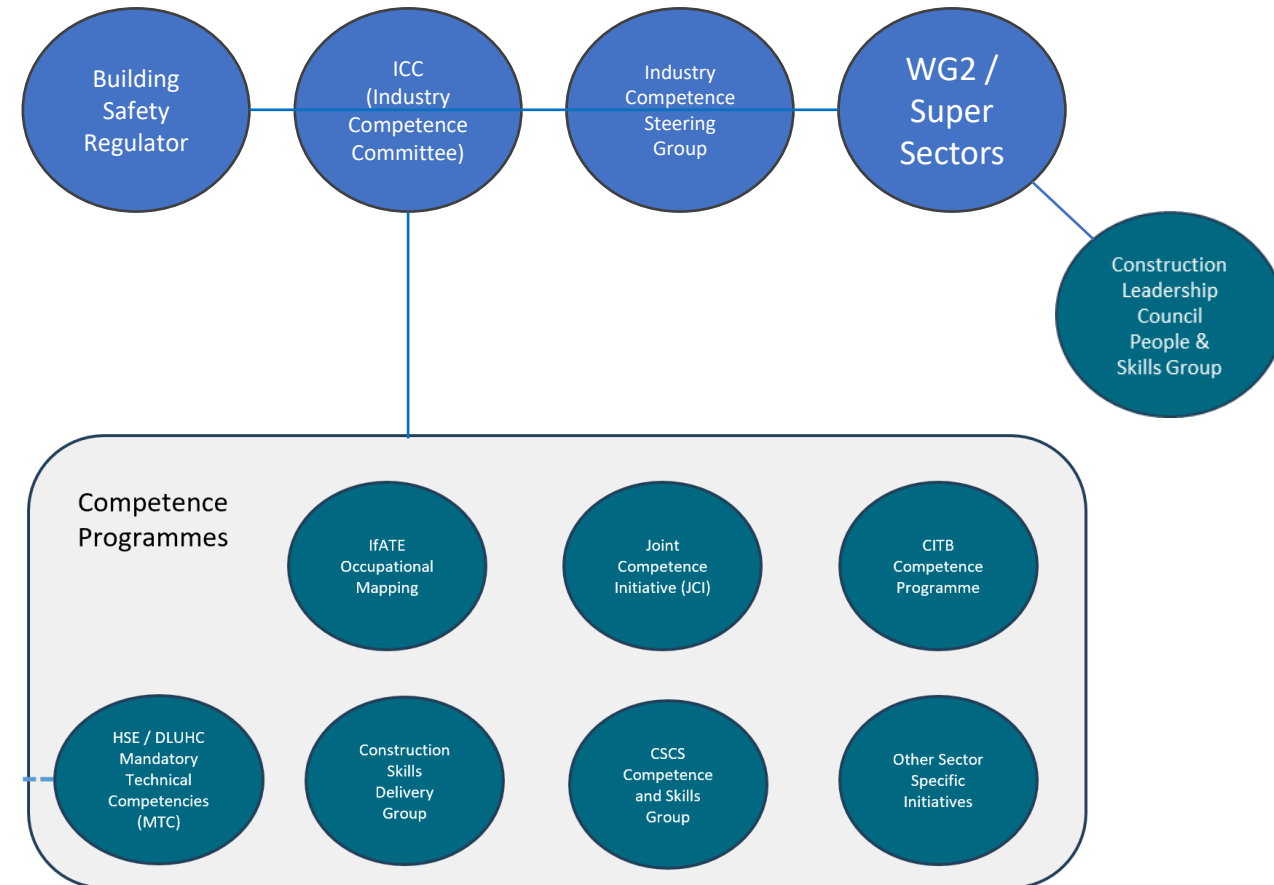
- There are some critical drivers for the routes needed in the future for both entry and progression into the sector:
  - **Building Safety Act:** The industry must increase overall levels of competency to meet the legislative requirements of the Building Safety Act, enforced by the Building Safety Regulator who is establishing a competency regime separate from the work of DfE on apprenticeships and qualifications, see over.
  - **Digitisation:** the new digital technologies, including AI, will allow the industry to work SMARTER; becoming more productive and raising quality. A large proportion of the workforce will need to embrace these new technologies and become fully competent in their use. As these technologies will be continuously evolving there will be a critical need for short CPD/accredited courses to upskill the existing workforce and also be included as modules in the entry programme such as apprenticeships, degree apprenticeships, HTQs and T Levels.
  - **Net-Zero:** Construction will play a significant role in achieving Net-Zero by retrofitting 29 million premises across the UK, building the infrastructure for the Net-Zero economy and reducing carbon emissions from the construction process itself. New ways of working, new materials and new products as well as better waste management will all have a part to play. A large proportion of the workforce will need to embrace these new 'green methods materials and products' and become fully competent in their use. As these will be continuously evolving there will be a critical need for short CPD/accredited courses to upskill the existing workforce. These will need to be included as modules in the entry programmes, such as apprenticeships, degree apprenticeships, HTQs and T Levels. In addition, there will be new occupations which evolve for construction in the Net-Zero economy.
  - **Productivity and modern methods:** The industry will need to increase its productivity through new ways of working and utilisation of the new technologies. One of the keys to this will be a move to more off-site manufacturing and on-site assembly or installation. There are a number of barriers to the full exploitation of off-site technics including commissioning, planning and full acceptance by the financial and insurance sectors. These barriers would need to be addressed over a period of time.
- Whilst appreciating that both entry and progression are important, bearing in mind these major strategic drivers' **up-skilling the existing workforce is the immediate highest priority, including upskilling the labourers and moving more of them to level 2 competencies.**

# 5. Drivers a Background to Competency (Contd.)

## Competency – the holy grail

### Do it right – first time – every time

- In order to be able to comply with the Building Safety Act and support a sustainable and productive economy, including civil engineering and infrastructure projects we must move from a position where we have some 442,000 people in the workforce who cannot demonstrate competency to a place where everyone is competent and we are able to update that competency for digitisation, modern methods of construction and Net Zero (green skills).
- Government has established, arising from the UK wide Building Safety Act, a regulatory and compliance structure which impacts the occupations needed for the industry and the apprenticeships and qualifications required for these occupations to both demonstrate and verify competency. This is discharged through the Building Safety Regulator who also deals with related infrastructure
- The skills policy initiatives in England and the Devolved Administrations are not as yet fully aligned to the UK wide regulatory process and the ‘super sectors’ competency work which is well advanced.



## 6. Range of Routes Needed for the Future

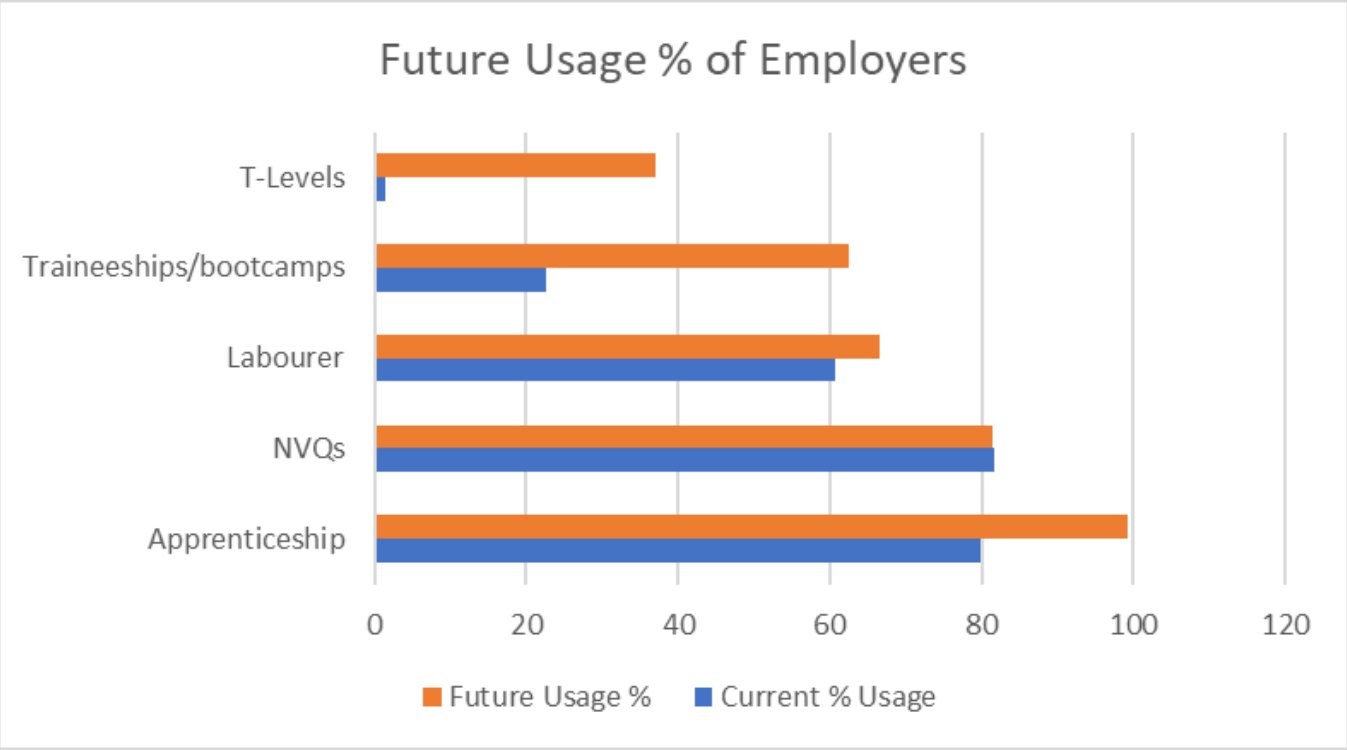
- It is clear from the review that industry wishes to retain all possible routes with a focus on the same three main routes for the operational trades and craft occupations i.e.: apprenticeships, NVQs and labourer entry. There is very high support for a new generation of modularised competency based VQs to replace the traditional NVQs. These would be used for entry, progression and the all-important up-skilling.
- In terms of the professional, technical and managerial occupations, industry also wishes to retain all possible routes and again focus on the same three main routes i.e.: apprenticeships, NVQs and university courses. As with the operational trades and craft occupations there is very high support for a new generation of modularised competency based VQs to replace the traditional NVQs for entry, progression and up-skilling.
- Degree apprenticeships have become very popular since their introduction and they are clearly replacing the traditional 3-year university degree course as a route. This trend is expected to continue.
- The Charts 6.1 and 6.2 show the survey results. Panels 6.3 and 6.4 provide quotes submitted by employers into the review which gives a picture of the range of views being expressed.
- As well as the statistical survey results employers have made separate submissions and comments on the skills system, see the panel following the two charts. There are some common messages that have come out of the other parts of the Review particularly calls for:
  - A consistent UK wide construction skills system with core common occupational standards (NOS) which would allow localised flexibility for Northern Ireland, Scotland and Wales as well as English regions and sub-regions. This flexibility is also needed for the variations required by differing occupations and groups of occupations; and
  - A single simplified Levy for apprenticeships and training to replace the existing Levies. The aim being to make this SME 'friendly' and also cater for the labour only and self-employed part of the workforce.



# Chart 6.1: Future Routes - percentage of respondents

## Operational trades and craft occupations

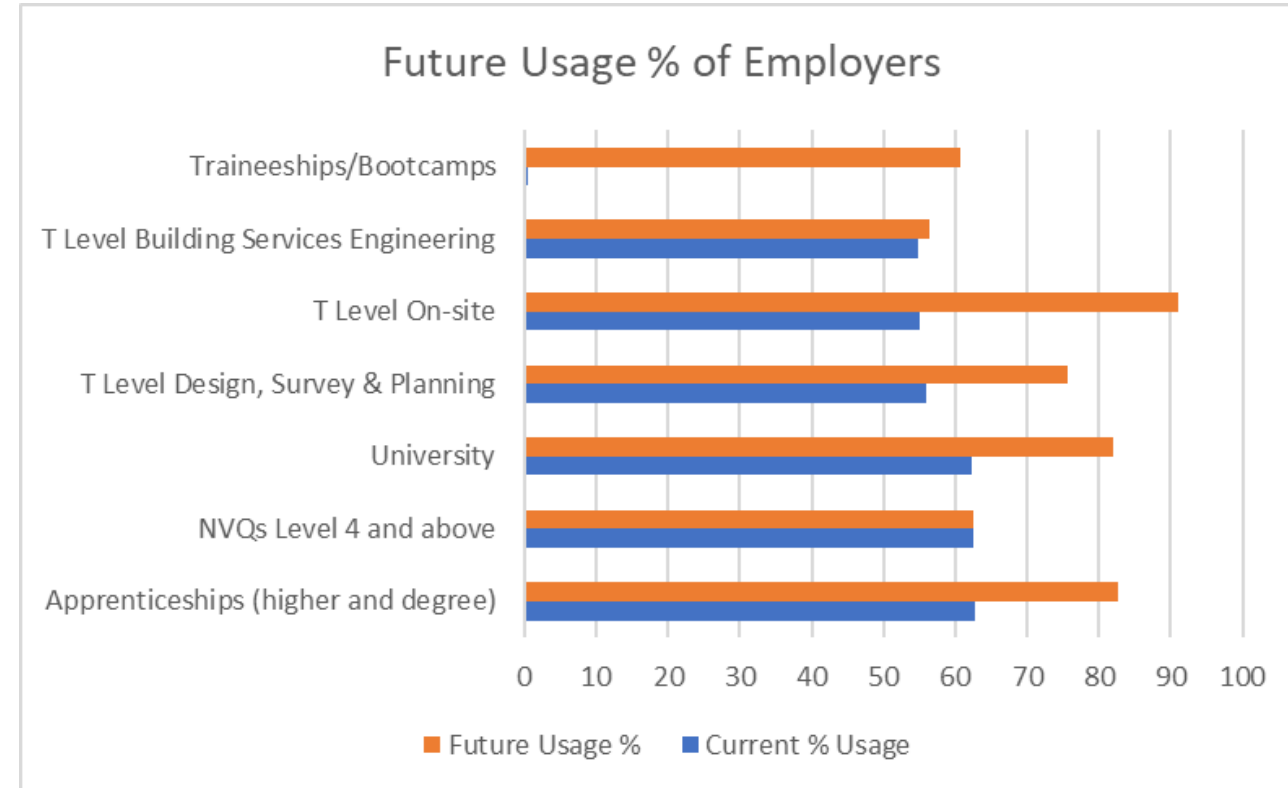
- The three highest routes employers, who responded to the survey, plan to use for bringing people into the operational trade and craft workforce in the future are still:
  - Apprenticeships (99.36%)
  - NVQs (70.59%)
  - Labourer (66.67%)
- The increase in apprenticeships is conditional on changes to the Levies, funding and entry requirements.
- Traineeships and bootcamps could increase, dependent on quality.
- T Levels are only going to be a limited route and are dependent on access to level 3 apprenticeships and a significant change of curriculum to support future progression to level 4 apprenticeships or roles.
- Some 82.47% of employers say they would use a new generation of VQs if they were modularised and could be used for recruitment and upskilling.
- 99% of employers said that they would support alternative entry pathways into apprenticeships.



# Chart 6.2: Future Routes - percentage of respondents

## Professional, technical and managerial occupations

- The three highest routes employers, who responded to the survey, plan to use for bringing people into the professional, technical and managerial workforce in the future are still:
  - Apprenticeships (82.74%)
  - NVQs Level 4 and above (62.58%)
  - University (82.02%)
- Traineeships and bootcamps could be used by 60.76% of employers in the future, dependent on quality.
- T Levels could be used in the future by 56.31% to 91.10% of employers for level 4 and above jobs. This is conditional on changing and up-dating the curriculum.
- Some 21.80% of employers say they would consider recognising the new HTQs for entry into the industry and 21.44% for progression for existing employees.
- Some 82.29% of employers say they would use a new generation of level 4 and above VQs if they were modularised and could be used for recruitment and upskilling.
- 99% of employers said that they would support alternative entry pathways into apprenticeships.



## Panel 6.3 Quotes from Employers – Levies and Funding

“a lot of improvements to be made with regards to smaller businesses and support around access to apprenticeships”

“Minimum wage for older apprenticeships is too low; this contributes to industry wide losses as individuals cannot afford to remain on programme due to low wages”

“Too much money has been allocated to degree apprenticeships which leaves little left to fund the practical training required for occupational trades”

“To be more flexible in the types of training that can be paid for from the levy. To include pre-apprenticeship programmes such as bootcamps that have been scrapped”

“One levy and more targeted than CITB’s which is too narrow”

“One levy more focussed”

“More flexible and short-term Levy so we can upskill existing employees easily”

“more access to the levy for skills training, 100% funding coverage of costs”

“We have a level 5 Retrofit Coordinator apprenticeship in development and will soon have an insulation technician at level 3 without these our industry does not have any ability to draw down the levy so we need a more flexible and easier funding system that recognises this”

“More funding”

“Left over levy funds should be used for T Levels and Sector specific VQ’s that are not linked to apprenticeships”

“Use of levy funds to access other regulated qualification delivery outside of apprenticeship standards”

“We need a simple UK wide levy which can support training and apprenticeships and is easy to use for SMEs”

“More flexibility in how it can be used, for instance could there be a fund for apprentices traveling to their training provider”

“More ways of helping SMEs and micro businesses get and retain people and fund this training”

“More flexible Levy with shorter time frames”

“Levy access for skills training, full funding coverage for costs”

“Clearer information regarding levy funding for small employers”

“More flexible use of the levy for traveling to train for instance”

“Training provider tutors needs to be an attractive career so levy funding bands need to support good salaries”

“The current levy funding should be protected for apprenticeships, but rules should be changed to make it easier for businesses to engage”

“More flexible utilisation of the levy”

## Panel 6.4 Quotes from Employers – Skills System

“The value of occupational apprenticeships needs to be recognised. Apprenticeships are a lifeline to those who are unable to engage academically at normal school leaving age and beyond”

“To support a wide workforce, NVQ and development course that are not covered by the levy”

“Replace or reinstate the Level 2 & 3 NVQ's as part of the apprenticeships”

“The card systems have hindered the growth of apprenticeships, the workforce were handed an easy option to gain access to site, which removed the need to achieve any type of apprenticeship, these then fell away, causing a fragmented skill level within the workforce”

“We need a common approach and system across the UK”

“More included on new Green Skills”

“Better recruiting in school, better way to get into the industry, better funding for training, on-site-assessment (OSAT) for existing trades”

“Changes in the standards to reflect industry specific requirements not a one-hat-fits all approach”

“Simplifying the system and making it easier for SME's to access”

“The apprenticeship route has become far too academic, they need to return to what they were intended for”

“Awarding bodies are all competing against each other and without an industry quality and standards enforcement authority the standards are spiraling downwards and undermining the qualifications”

“We need a lot more NVQ L2's for the sector”

“Make NVQs L2 part of the apprenticeship”

“NVQ's are extremely poor in construction and cannot replicate what happens in a college for most BSE skilled trades”

“Need the NOS updating to reflect the new plant training standards and to have an industry wide review on the quality of delivery, from assessors to awarding organisations”

“Practical hands-on skills incorporated as opposed to theoretical paper-based qualifications”

“Level 2 is an entry route and should be made more accessible and inclusive for those not really favouring or suited to classroom-based education”

“Level of competence and ability to work need improving”

“Over the past 5 years I have noticed that less work, effort and proof of competency is required to achieve level 3. The evidence is there to back this up, the competency of site staff is on the decline, workmanship standards are falling and accidents due to poor training, distractions from electronic devices and a lack of understanding of the dangers on construction sites”

## Panel 6.4 Quotes from Employers – Skills System (contd.)



“NVQs L3 to be more in keeping with MMC and wider demands”

“Remove the word labourers, everyone should be on a road of progression. I could never understand what the purpose was for a green card, there's a standard/qualification for almost everything we do, the green card stopped progression, it might well have suited companies from a wage structure, but it created a mess for industry”

“Lots of policy, lots of paperwork, lots of confusion, lots of regular change – too much change”

“Lots of traineeships/ bootcamps seem to have disappeared recently but pre- employment programmes like these are really needed”

“Not sure why T-Levels would be more beneficial than a trade apprenticeship to a candidate or employer?”

“More clarity on progression routes from T Levels and support in the form of a placement workbook”

“T Levels need to be more specific and less generally broad as learners do not get any benefit or real understanding of a trade or professional working environment”

“Currently working on the DSP T Level content with DFE and IFATE as it needs updated to reflect the Building Safety Act requirements and the golden thread”

“We don't use NVQ's in England as we now have an employer Standard. However, for Wales and Scotland we still deliver under a framework, so the NVQ is part of a wider package of training”

“T Levels need to be better structured to suit the employer. day release experience is restrictive for the employer and candidate as they don't get the continuity on tasks.”

“Traineeships/bootcamps good for diversifies routes into construction for new entrants, but for upskilling staff not seeing the ROI”

“Start to introduce traineeships at say 16, so that the young people not suited to the academic route can get an early insight and link them to employers”

“Traineeships don't address specific Labour Market Needs for Net Zero”

“Labourers very rarely stay labourers for long in Civils. They quickly identify jobs they want to do and either push themselves or are actively encouraged to learn new skills such as labourer to groundworker”

“Certain parties have conditioned the term labourer, the fact that the health and safety standards have been accredited by national regulators, should remove this thought process, even domestic cleaners have a minimum of a level 2 qualification, the green card and label of labourer was given by others for all the wrong reasons, get rid of it”



## Panel 6.4 Quotes from Employers – Skills System (contd.)



“Labourers only really exist in their true meaning in Engineering Construction. We do not see companies paying for a labourer on a commercial construction site working along self-employed CIS labour”

“Simple!!! make the Level 4 VQ courses exciting, stimulating, interesting, and make sure the course content as not been written by people who have not worked in the industry”

“Larger scope of universities offering sector-based programmes”

“Universities to diversify and become more integral into all aspects of industry”

“T Level do not cover energy efficiency, retrofit or any other ‘green’ skill”

“I would like to see qualification in the standards. I am unsure what the providers are teaching”

“Soft skills to be included in the curriculum for T Levels and all other Quals and courses. Old ECLD”

“Universities are to remote in their approach to vocational training and have struggled with apprenticeships. They also need to look at how to release full time students who wish to follow an apprenticeship as they have found full time study at this level is not for them and not penalise the individual financially”

“The EPA should have some weight in regards progression. Stop apprentices completing say an HNC, which gains them the necessary points to progress, and mean they do not bother with the EPA. This reduces the completion rates of apprenticeships”

“Has to have a more practical and longer practical work placement element to the T-level as pure theory does not give you the experience or competency required to survive in the workplace”

“Lack of cohesion between educational institutions & employers”

“Condensing delivery so 3-year degrees made shorter, getting people into work please”

“More fast track programmes for individuals in leadership roles”

“NVQs at Level 4 and above used solely or as an option for measuring competency as not all learners are suited to final exams but maybe very proficient in the workplace”

“Scrap T Levels, they are not working and don't give enough focus like the BTEC level 3 construction and built env course does”

“Less focus on academic in degree apprenticeships and more focus on relevant industry topics mapped to the standards required”

“We use the professional bodies to ensure content is appropriate / employers feed into this process - don't need a competing system by Universities”

# Appendix: Types of respondents



- All – Building, civil engineering and building services/M&E
- Apprenticeship agency
- Civil engineering & infrastructure
- Construction infrastructure
- Design
- Design build
- Duct and pipework
- Fire protection
- General construction
- Green, net-zero – retrofit etc.
- House building and property development incl electrical, plumbing
- Labour supplier
- Masonry/concrete specialists
- Materials and construction suppliers
- Plant companies – hire and sales
- Power station and distribution infrastructure (incl major M&E)
- Rail – all aspects
- Scaffolding
- Thermal insulation
- Training organisations (employers and trade groups)