

# Robots

## will build our future homes.

**The construction industry is suffering from a small number of new entrants wishing to pursue their careers in this sector. The population is growing and so the demand for new houses. The construction worldwide employs only 8% of the population. Currently, the skills shortages are influencing the supply of new homes.**

There is an urgent need to find the solution that will secure the sector growth. With the development of new technologies, there is the chance that the shortage of skilled bricklayers will be replaced by robots like Hadrian X or Sam 100 and others. Top construction companies will use robots to meet the demand.

Amongst the recent innovation in this field, Australia's Fastbrick Robotics introduced to the industry Bob, the Builder. This new bricklaying machine can build a house four times faster than human workers. It is not only extremely efficient but also accurate. Bricklaying robot Hadrian 105 automates the job of laying bricks and is capable of finishing brickwork on the house in few days at a lower cost and a higher quality than in the standard way.

Currently, there is the new prototype in the making called Hadrian X which will be bigger and faster. Hadrian X will be able to lay 1000 bricks per hour as compared to the previous model doing 225 blocks per hour.

Moreover, it can handle various types of blocks and can cut, grind, mill and route them to fit the structure before laying down. Instead of mortar, this machine uses adhesives and interlocking system. The robot can be mounted on the track for easy transport between building sites. After installation on the site, the bricks are lifted off a pack and placed onto a shuttle that gets them ready for cutting, drilling or laying. Laser tracker and sensors guide the brick laying process. The bricklaying machine can be programmed to make room for doors, windows, pipes etc.

Hadrian X is the first globally patented bricklaying robot. The Australian company has developed the world's most advanced construction robot. Fastbrick's Hadrian X will commence working in Q3 this year in Mexico as a part of testing. It is the first time that the construction robot is being deployed in the different country. Mexico suffers from a housing crisis and environmental catastrophes. Its low-rise construction consists of mainly brick and block construction. There is also a lack of skilled construction workers. All these factors are an advantage for Hadrian X robots that might in the future replace bricklaying labour in Mexico.



The CEO of Fastbrick, Mike Pivac commented: "The Hadrian X presents a solution to Mexico's acute shortage of well-constructed affordable homes, with access to the necessary services like schools, parks and commercial areas." He added that "GP Vivienda is an ideal partner for FBR in Mexico, as they have shown they are adaptable and willing to embrace disruptive technology and have sufficient scale to offer an excellent proving ground for the Hadrian X and future DST applications in North America."

In the US, the semi-automated mason SAM

100, is currently deployed on some building sites. It lays bricks every 8.5 seconds and beat human bricklayers who manage to put 300-600 blocks in 8 hours. Sam works collaboratively with the mason, who has to set up the robotic builder, supervise health and safety and assist with the bricklaying process. However, introducing SAM 100 allows cutting workers cost by at least 50%. Construction Robotics that developed SAM 100 is planning to introduce bricklaying robots to Britain's construction sector.

Some are worried that the automation of the

bricklaying industry will result in mass layoffs. Bricklayers have been laying bricks and blocks in the same manner for years now, and it is the highest time to innovate this building process. The recent involvement of robots in the bricklaying jobs shows that it is more difficult for a machine to build the smaller structure so probably residential houses will be manufactured in the factories while low rise and high rise buildings could benefit from construction robots. Hopefully, the digitalisation and advanced technology will help to bring the new generation of workers into the industry.

Source:

[www.fbr.com.au](http://www.fbr.com.au)

[www.construction-robotics.com](http://www.construction-robotics.com)






# Forecast for London construction

The construction industry has suffered from the uncertainty due to Brexit negotiations what is influencing investors' planning ahead. Moreover, the liquidation of the construction giant Carillion at the beginning of this year impacted workers, building businesses and the whole market. The productivity is the primary challenge for the industry, but the weaker pound is also putting the impact on the cost of materials as approximately 65% of construction materials are imported. Building costs are set to rise by 4 per cent annually to 2021.





Predictions are that when the Brexit deal is made, investors will release funds and go ahead with postponed projects. In London projects connected with new builds are set to perform better than residential refurbishments. In current economic and political circumstances, the constant re-assessments of the condition of the industry is required to inform businesses about levels of demand, project feasibility, any possible cost pressure, etc.

However, according to the recent surveys, there are no signs of problems for the construction industry in the London as indicators show the London builders performed very well in the second quarter of 2018. The Federation of Master Builders's (FMB) survey called the "State of Trade Survey" that assess the UK's SME construction sector gave the positive results like for instance, the recorded rise in optimism among London's builders:

- increase in the workloads, enquiries and expected projects rose by 2 per cent
- 89% reported increasing material prices
- 65% is struggling to hire bricklayers, and 60% are struggling to hire carpenters

Barry Mortimer, Director of FMB London, said: "London's builders enjoyed rising workloads in the second quarter of this year and are also optimistic about the coming months. While sustained growth and this slight increase in activity are very

welcome signs, any optimism should be tempered by the sharp rises seen in the number of firms reporting that they are struggling to hire bricklayers, carpenters and plasterers. London's SME builders, as well as protecting themselves from sunburn, are scrambling to protect themselves from rising skills shortages. Having to turn away work due to a lack of staff is heart-breaking for small business owners, but this is the situation for many of the capital's construction SMEs."

Mortimer continued: "On top of the significant constraints that lack of skilled workers imposes, Brexit worries and concerns are reaching a crescendo. The FMB's recent call for clarity on post-Brexit visa rules is critical. London's construction industry has leant heavily on skilled EU workers for some years now. Indeed, one in three of the capital's construction workers is from the EU. An exodus of these workers, or any cliff-edge in terms of access to European workers, could hit the capital's housing and infrastructure projects very hard indeed." Mortimer concluded: "As well as providing the certainty and stability which London businesses are craving for, the Government needs to take into account the needs of key industries like ours in deciding their post-Brexit approach to migration. It is vital to the London economy that its construction sector remains on the sunny uplands

and retaining access to skilled migrant labour will be crucial to achieving this."

According to the Construction Industry Training Board (CITB), over 150,00 construction jobs are predicted to be created over the next five years despite Brexit uncertainty. Approximately over 15,000 carpenters and almost 10,000 labourers will be needed as homebuilding ramps up.

CITB Policy Director Steve Radley said: "Despite all the gloom around Carillion and uncertainty from Brexit, our report's message is that construction will continue to grow and create more jobs. "Though growth is slightly down on 2017, it's looking more balanced with housing and infrastructure both expanding significantly. And the range of job opportunities is growing. While we need to bring in lots of people in the trades, the fastest growth will be for professionals at 7.8% and for managers and supervisors at 5.6%. "By 2022, employment will be in touching distance of the heady 2008 peak, so we face a massive recruitment and training challenge, which is likely to get harder after Brexit. So while we can take some comfort from weathering the recent storms, it's vital that we make the investment in skills today that will shape our own destiny for tomorrow."

(Source: FMB, CITB)

# Cards for dry lining professionals

**Finishes and Interiors Sector (FIS) has launched two new opportunities for dry lining trade to upgrade their Blue Skilled Worker CSCS card as an replacement for the expired CRO cards that cannot be renewed. The Government and professional bodies introduced many measures to get labourers qualified and certified.**

These opportunities form a part of the Fit-out Futures programme which aims to get a carded workforce, this is a brilliant opportunity for FIS members to get their operatives upgraded to the Blue Skilled Workers CSCS card and get them qualified and on site.

Blue Skilled Worker CSCS in dry lining can be obtained with 20% discount on the full price when upgrading from current CRO card. The total cost will be £995 + vat. The expired CRO cards will not be upgraded. The cost of application for new card include registration, paperwork, onsite assessment and NVQ

level 2 completion which will enable applicant to become qualified in drylining. The Blue Skilled Worker CSCS card is valid for five years.

Moreover, there is the second offer of a fast track route for experienced drylining finishers to upgrade from their current CRO card to a Blue Skilled Worker CSCS card in two days for £300 + VAT. There is the requirement to spend one day away from site to gain the Blue Skilled Worker CSCS card. For the experienced labourers this is an opportunity to transfer their skills into a qualification with which they can work on building sites.

In addition to card scheme, FIS launched the BuildBack Programme which is directed to job seekers who are willing to start a career in drylining. The programme consists of two weeks' college training in the skills and qualifications required for drylining, followed by a two-week work placement on-site with a local employer.

The series of open days for employers to meet with the trainees and programme partners took place across the country this year. Getting involved in the FIS BuildBack Programme and providing work experience for trainees is a great opportunity for employers.

More information on cards for dry lining trade visit [www.thefis.org/cscs/](http://www.thefis.org/cscs/)





# #iBuiltThis2018 competition

**Finishes & Interiors Sector (FIS) is looking for the #iBuiltThis2018 champions. The flagship competition is taking place this month. It will be open for entry submissions on the 3rd September. The closing date for entry is on the 23rd September.**

The competition like in previous years is run on social media for the period of three weeks. Winners will be announced at the official awards ceremony at the UK Construction Week Exhibition on the 9th October 2018. There will be three categories for work submission:

- 13 years and under
- 14 to 18 years
- 19 and over

The campaign aim is to bring the UK construction industry together to show the contribution of the young generation into the UK built environment. This encourage participation and collaboration of young people in the construction sector. This year competition is driven by the high demand after last year successful edition that shown the innovative projects. The main goals of #iBuiltThis2018 competition are:

- to bring the industry together
- to improve the image of the industry
- to change the industry perception

Last year campaign was very successful. The last year's winners were announced at the UK Construction Week in October 2017 by Chanel 4 TV presenter George Clarke. Some of our readers also submitted their entries.

The rules of the competition are straightforward- participants have to share the photo of themselves with the image of the completed project which they have built or helped to build, using the hashtag #iBuiltThis2018 on the FIS social media platforms of Instagram and Twitter. Entrants will be able to vote for the best entries themselves and recommend their friends and families to vote as well when the public voting stars on 24th September. How will the #iBuiltThis2018 campaign be judged?

Entries will be assessed by the panel of experts

representing the industry:

- This is an all age inclusive campaign, with three specific age categories, 13 and under, 14 to 18 and 19 and over.
- There is a clearly a defined submission period and a clearly defined voting period which will run simultaneously for all age categories on social media.
- The public vote will make up 50% of the overall scores. The remaining 50% scores will be ranked in order by the judging panel.
- On the 9th October 2018, the winners of #iBuiltThis2018 competition will be announced at the competition awards ceremony held at UK Construction Week exhibition and prizes awarded in November 2018.

*To learn more about the campaign, visit [www.thefis.org](http://www.thefis.org)*

*Source: FIS*



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## I Built This 2018

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# London Build 2018 Expo

**The well known leading construction expo London Build 2018 will be held in Olympia London on the 23rd and 24th October. Register your interest now and get your free tickets now.**

London Build is free to attend and it will feature over 300 exhibitors. It is the great place to network as it covers all sectors of the construction industry. Over 240 speakers will talk about the latest trends in construction, upcoming projects

and important topics. Moreover, during London Build 2018 numerous networking sessions will be held, like for instance, Meet the Buyers by Constructionline, an Oktoberfest beer festival, the Women in Construction Morning Tea, etc. This event is packed with conference sessions and CPD-accredited workshops. Don't miss the opportunity to meet London's contractors, developers, architects, local authorities and others. The event will be divided into 9 zones: Buildings, Infrastructure, BIM & Digital Construction, Sustainability, London Design, Interior and FitOut, Fire Safety, Product Innovation, Site Machinery & Equipment. *More information on this year edition you will find at [www.londonbuildexpo.com](http://www.londonbuildexpo.com)*

# UK Construction Week 2018

**UK Construction Week 2018- the UK's largest construction event will be running from 9th till 11th October together with Grand Designs Live on the 10th and 11th October. The event is free to attend and consists of nine shows: Timber Expo, Build Show, Civils Expo, Plant & Machinery Live, Energy 2018, Building Tech Live, Surface & Materials Show and HVAC 2018.**

UK Construction Week 2018 is the opportunity to take part in seminars on the sector news and trends run by experts. Fully accredited CPD programme for construction professionals provides free education for all visitors. Moreover, BRE Academy will be hosting workshops on BIM, Offsite, Urban Planning & Design. The Innovation Trail offers the place to explore new technologies and products. More about the show you will find at [ukconstructionweek.com](http://ukconstructionweek.com)

The Build Show offers the fantastic networking opportunities for contractors, small builders, merchants, product manufacturers and all others from

the supply chain. IBB Builders Merchants are amongst exhibitors at the UK Construction Week. Visit the Build show and find us at stand B575. Register now to get your free tickets at [ukconstructionweek.com](http://ukconstructionweek.com)



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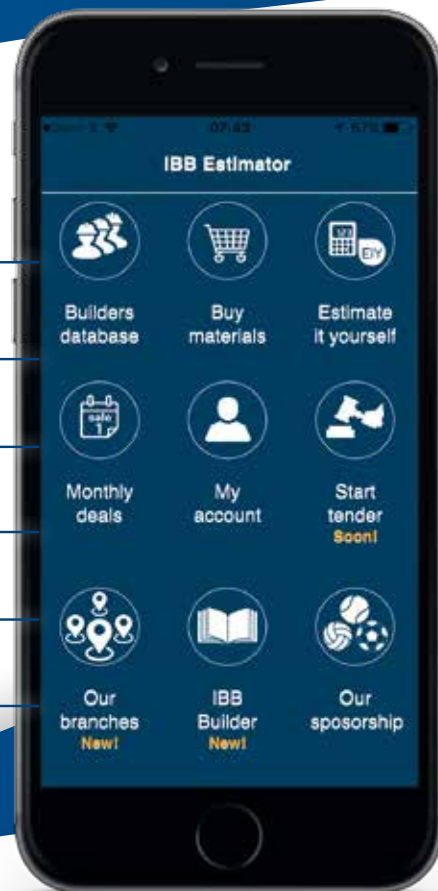
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# THINKING ABOUT YOUR CAREER CHOICE? THEN THINK BIG



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Industry led, funded by the CITB levy



# T-Levels for Construction

**The Department for Education has recently announced that teaching of T Levels for construction will commence in September 2020. T Levels will be an alternative to A Levels but for practically minded students.**

T Levels is the technical programme that will last 2 years. It is designed with employers to ensure new entrants into the industry will be equipped with the excellent skills. Students aged 16 to 18 will have a technical alternative to A Levels.

T Levels will provide a mixture of:

- technical knowledge and practical skills specific to their chosen industry or occupation
- an industry placement of at least 45 days in their chosen industry or occupation
- relevant maths, English and digital skills
- common workplace skills

The programme of T Levels will be developed by industry professionals and employers, including for instance experts from companies like EDF, Lloyds, Skanska, Morphy Richards and many more.

Students who achieve a T Level will get a certificate recognised nationally by employers which will set out what they have achieved as part of the programme. Apart of construction industry T Levels will be available for instance in the following industries: digital, education, engineering, health and science, legal, creative and design, etc.

On the completion of the T Levels students will be able to move into:

- a skilled occupation
- higher or degree level apprenticeships
- higher level technical study, including higher education

T Levels might address the construction industry skills gap and ensures its competitiveness. Together with the reform of the apprenticeship levy it will offer the better incentive for young people to choose the career in construction. In May, the Education Secretary, Damian Hinds has named 52 colleges and post-16 providers to teach the new T Levels. Mr Hinds said: "T Levels provide a high-quality, technical alternative to A levels ensuring thousands of people across the country have the skills we need to compete globally – a vital part of our modern industrial strategy."

However, the Federation of Master Builders has warned to government to be more realistic about the T Levels in construction industry. Brian Berry, Chief Executive of the FMB, said: "The idea that a student who has completed a T Level in bricklaying is able to call themselves a qualified bricklayer is not credible. The Government must be realistic about how much can be achieved in two years of largely college-based learning. Although T Levels include a three-month work placement, when the rest of the individual's knowledge and skills are acquired in the classroom, in construction they will need more time onsite, post-T Level, before they can and should describe themselves as being qualified in that trade. Small and medium-sized construction firms, which do the bulk of training in our industry, would rather

view T Levels as a rich pool of talent through which to find apprentices."

Berry continued: "More positively, the Government has listened to the concerns of the construction industry and stated its intention to make work placements as flexible as possible. In construction, work placements are not popular or common so persuading sufficient numbers of employers to offer these opportunities will be challenging. The Government being open to the three-month placement being achieved through more than one employer is therefore vital. However, to ensure work placements are as attractive as possible, the Construction Industry Training Board (CITB) should consider offering financial incentives to employers through CITB Grant. We know, for example, that a typical construction SME is likely to shell out an additional £500 for their Employers' Liability insurance because of having a young person onsite for three months. This is on top of the resource needed to closely supervise that young person. If employers can be financially incentivised somehow, it would be helpful."

Berry concluded: "If implemented properly, T Levels have the potential to provide parity of esteem between vocational and academic education. Although there are challenges regarding the implementation of T Levels, we are committed to working with the Government constructively to overcome those challenges. If the UK is to increase its productivity, we need more young people, and their parents and teachers, to recognise the value of a career in construction. With Brexit just around the corner, this has never been so important."



# Scaffolding Trailblazer

**Scaffolding Trailblazer programme will start on 1st October to train the next generation of scaffolding apprentices. This course is launched by the Institute for apprenticeships, and it will replace the current framework. All applicants registered on the current system before the introduction of the Trailblazer will have two years to complete their training.**

The Government established the Trailblazer initiative as part of a significant reform of apprenticeship training in England. The Scaffolding Trailblazer standard was developed by a committee comprising representatives from around 15 scaffolding contractors and supplemented by Institute of apprenticeship staff, CISRS, CITB and two approved training providers.

Dave Francis, Scaffolding Trailblazer Committee Chair, said: "The Trailblazer initiative has

allowed us to complete a full review of the apprenticeship programme. Industry experts have worked together to set the standards for all interested to develop their careers in the construction sector through a Trailblazer apprenticeship.

"Employers have the ability to directly control their employee's training, with the knowledge that they are participating in a standardised apprenticeship programme with full quality assessment, delivering the workforce that industry requires."

On the course completion, the scaffolder will have the relevant knowledge on scaffolds erection, structure, methods of attachment, protection, safety and more. The scaffolder will be able to make adequate safety procedures, assemble and install scaffold materials, inspect scaffolding, etc.

More details on the course you will find at [www.instituteforapprenticeships.org/apprenticeship-standards/scaffolder](http://www.instituteforapprenticeships.org/apprenticeship-standards/scaffolder)

*Source: NASC*





