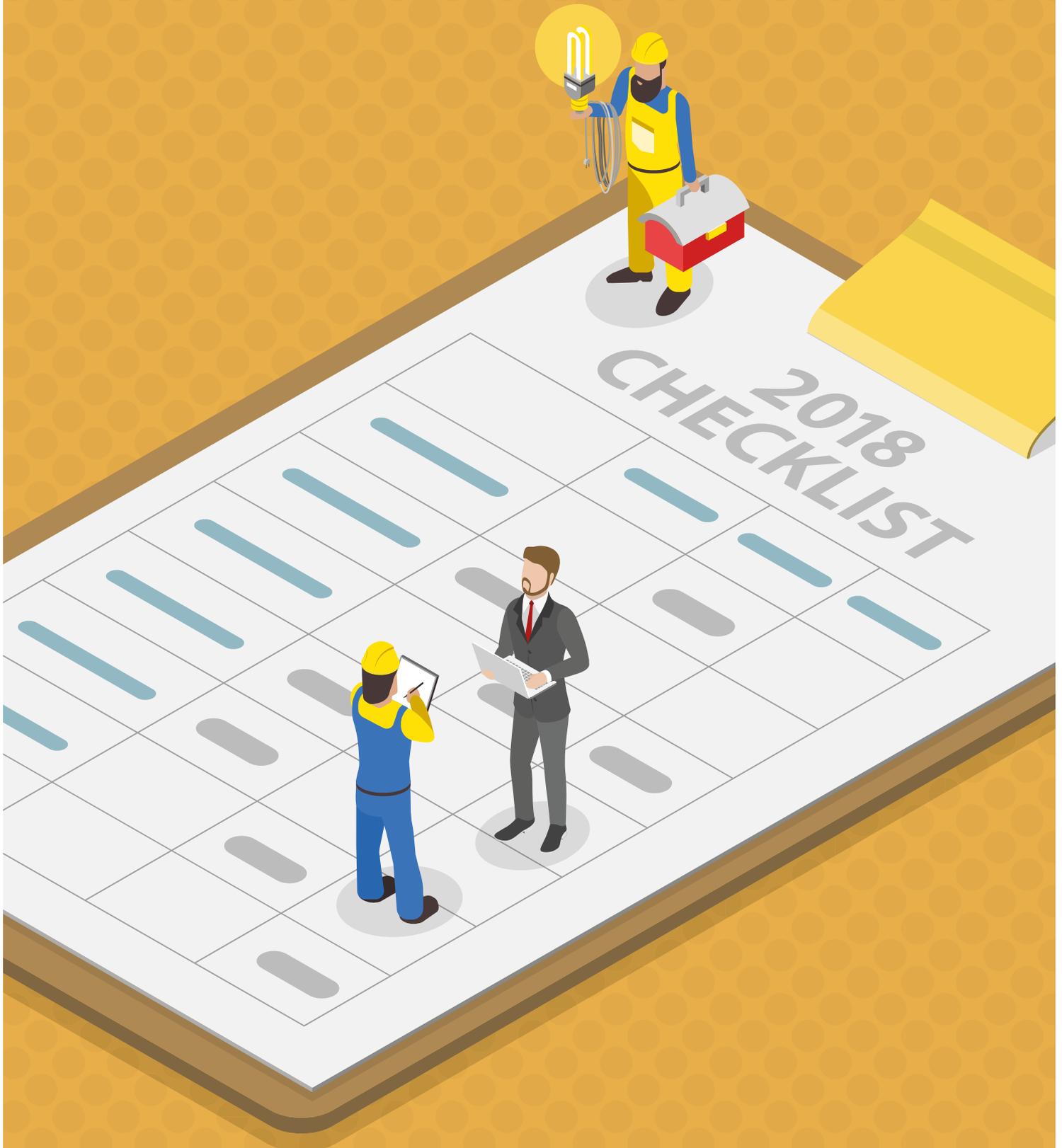


WiringMatters

Your insight into BS 7671 www.theiet.org/wm



New for 2018

IET Electrical website



I'm pleased to let you know that you'll see a new face of IET Electrical this month. We're launching a new Electrical site, which is mobile responsive, will offer an easier subscriptions process to Wiring Matters magazine, and, we hope, will be much easier to navigate.

The website is due to launch by the end of this month. In the meantime, you might see some changes on a few pages, such as the Shop – which, in early March, will be updated with 18th Edition books ready for you to pre-order.

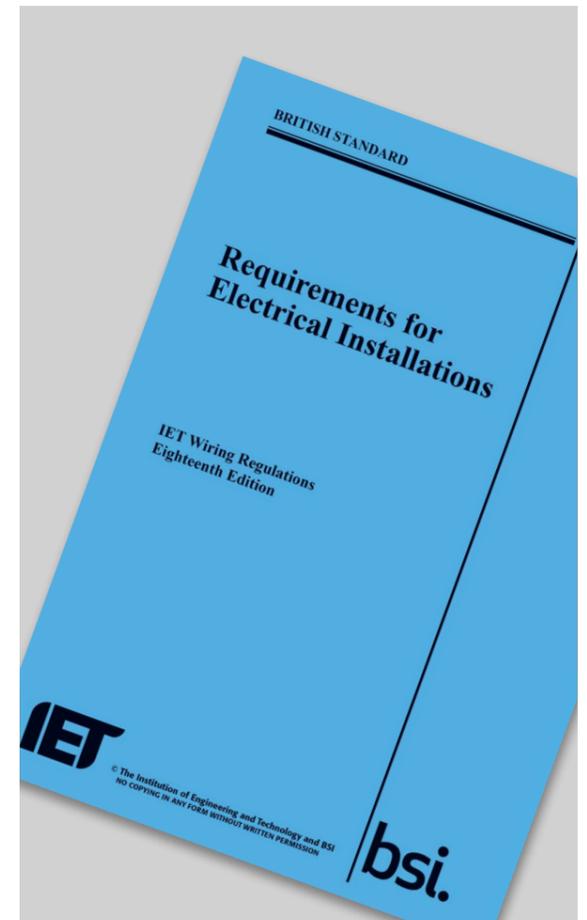
The new Electrical site is part of a broader package of improvements we're making to help us to continue to provide to the Electrotechnical community. Where 2017 focused on communications changes (introduction of our Twitter, more videos, more Wiring Matters issues and an improved Wiring Matters PDF download magazine), we are now focusing on technical delivery. The IET's new Academy will be launching, and will be providing training on BS 7671:2018 (more on this below). We are also continuing to source other ways to make our website better, such as improved Shop functionality, which we hope will launch towards the end of this year.

What does this mean for you?

The changes are largely cosmetic, and the website will have a slightly different look and feel. The change to the new site should be quick and painless, so you shouldn't experience any downtime or problems loading pages. If you do, please let me know: wiringmatters@theiet.org.

We will be redirecting old links to the new site. However, you may wish to update your bookmarks once the site is launched.

The forum and shop use different technology, so some of the benefits you'll experience on the new site – such as the mobile responsiveness – will not be fully available on the forum and shop in the very near future.



What's changed?

To introduce you to the new website, let's take a tour of each tab:

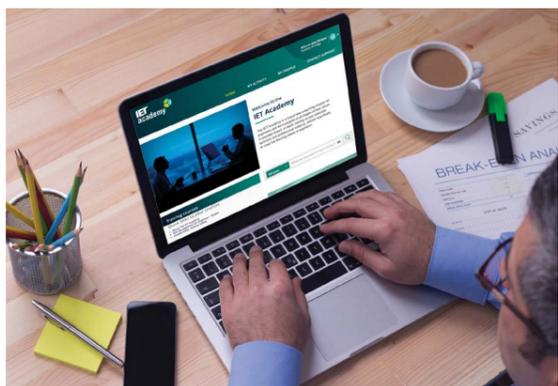
BS 7671

The main objective of the Electrical site is to give you updates and information about BS 7671. This tab remains much the same as the current 'Wiring Regulations' tab – we're just calling it by its official name.



Shop

We've streamlined our shop to make it easier to navigate and find what you're looking for. All our BS 7671:2018 titles will be available for pre-order from early March with 10% off.



Training

We're making it easier for you to find out what training is available to you. We're excited to announce that the IET's new Academy is launching in March, which will be providing training on BS 7671:2018 – more on this below.

The Training tab also pulls together other learning and development resources, such as the Student's Hub and a link to our Events page.



Wiring Matters

The magazine is still available for free online. We're introducing an easier way to subscribe, so that you can keep up to date on all the information about BS 7671 and your electrotechnical career, plus the work of the IET Standards team.

We've also made improvements to the PDF that you can download for free every issue. And, if you subscribe, we'll send you a special printed edition at the end of each year.

Resources

Our Resources area brings together all our free tools that you can use. You can contact the Technical Helpline to ask about a query related to BS 7671, access model forms, get information about the Building Regulations, Student's Hub and also find Wiring Matters.

Forum

Our popular forum is still where it used to be – log in to comment and be part of our community.

Introducing: the IET's Academy

The IET's new **Academy** offers a range of online training, including a training course to help bring you up to speed with the changes made to BS 7671 by the 18th Edition.

This training course, C&G 2382:18, is available online or offline via a free app, and you can learn at your own pace with access to the course content for 12 months. It offers you:

- expert technical content to get up to speed with BS 7671:2018;
- full or update course to suit your existing qualification level;
- 12 months access to all content;
- online/offline access via a dedicated app, when it suits you, at your own pace;
- three full practice exams; and
- a certificate of completion.



Visit the Academy website here

Interview with Allan Burns



Wiring Matters interviews Allan Burns, the author of the IET's Guide to Smart Homes for Electricians.

Allan, you initially started your career as a teacher. How long were you teaching for, and what prompted the change to a career as an electrician?

That's true, I taught secondary Science for 6 years. I loved it. My background is in Life Sciences but I fell into love again with Physics and Renewable Energy in particular. Working with kids was a real buzz, eager minds still asking real questions like: 'how did the 'grown ups' mess up our planet so badly they're supposed to be the responsible ones!' The question kept coming up and it kind of got lodged in my mind as much as theirs. In the end I just felt like I had to do something myself, so I did.

How did you prepare for your electrical career? What did you study and did you have to take time out of employed work to do so?

I trained up in night-classes as an electrician with the intention to become a holiday-time PV installer. It worked but it tipped me over the edge into a self-employed/own boss mindset. After a year I turned feral and concentrated on being a green entrepreneur. With hindsight, sticking it out in teaching another year to do night-classes in Business Admin and Accounting would have been a smarter move. I really stumbled at several points and looking back I can see how I could have avoided it with some real 101 business theory.

How did it feel leaving one career for one that is quite different?

Utterly exhilarating but also quite alienating and scary. I made my entrance into the industry through the Part-P qualification route at a time when it was not well received by the old-guard electricians. Some but not all were quite hostile to smart-alecks like myself who had picked up in 4 months, the same qualification they slaved for four years for. I could see their point but it was hard sometimes to integrate on site. On the flipside, there were doors that opened wide for me precisely because I was not industry-trained, it helped that I was specialised in the evolving renewables industry. A fresh perspective is no bad thing when everyone is having to make it up as they go along.

Did you have any doubts once you started in electrical?

Yes, it's a tough job and a tough industry. Huge overheads for equipment and accreditation that are not necessarily valued by the market. The liability the job carries in terms of the regulations and the Electricity at Work Regulation can really suck the fun out of the day and spoil your sleep too. About 2 years in I gained the insight that some of the stern and bristly characters I'd encountered in the job had probably trained themselves to be that way as a survival tactic. You need serious focus to be able to go home at the end of the day and be sure all those wires you wrestled in are going to stay out of trouble for the next 40 years.

You then expanded your business offering, going from the traditional electrical 'man in a van' route to offering solar and smart installations. What drove you to expand your offering in this way?

Being an MCS accredited PV installer was the goal for the first two years of my man-in-van exploits. It wasn't easy, the framework agreement and the monopoly of the BRE in training had the bar a lot

higher around 2008 in my opinion. Supporting a family as a newbie electrician while reaching for the MCS goal was like running up the down escalator in a suit of armour (spot the Monty Python reference), I made it just in time for the Government's retraction of the rather generous first round of PV FIT subsidies. I got financially slaughtered at that time, it was not fun. My re-incarnation as a smarhome specialist represents my own evolution in terms of survival and the evolution of the technology in that I began to see whole-habitat solutions as more beneficial.

Did this mean even more training? If so, what was involved?

I did soooo much training early on. City and Guilds in everything up to Level 3 Inspection and testing, the proper PV qualification, even training in periphery heating systems. It was too much with hindsight. Keeping my head down and building reserves would have been better. For the last 5 years I have a rule: I only do training if I have solid (preferably contractual) reasons to believe it will pay for itself within 6 months. The smart home industry is pretty hyped at the moment and that means there will be a lot on offer in terms of product and training; I would advise any entrants to look carefully before leaping.

Your new directions into eco-electrical may not have been met with a very large customer base, given how new these technologies are. Were you concerned about this?

While not always being conducive to sleep or long relaxing holidays, being small and having the electrical trade under my belt at least afforded me one luxury: being able to sit back and watch the specialists endure the feast or famine of being dedicated to what was a high-price niche market. There were times I'll admit I envied their feast but I never envied the famine. I'm quite proud also that I have the setup and the background to be able to say no to smart where it is not appropriate – sometimes the client just needs a 13 Amp socket.

What kind of preparation work did you do to ensure this shift in career went smoothly?

Ha ha, I never said it went smoothly. It could have and very nearly did end badly. Thinking broadly about it I suppose the thing that kept me afloat was believing that the direction I was taking it all in, using tech to create homes that don't burden the environment, had to be done. This kept me going and attracted the right kind of clients so in my case

the preparation was becoming a believer. I think I mentioned earlier that a course on business and accounting probably would have saved me a lot of sacrifice.

You're now authoring the Guide to Smart Homes, IET's forthcoming title, due out in 2019. So, another change in career. What has this journey been like?

I reached a point a few years back where what I knew was of more value than what I could install, which is when I set up Telemental as a Design Consultancy. I'm 48 and I'm kidding myself if I think I can out-install a 25 year old who plays five-a-side 4 times a week. On the flipside, I have experience and knowledge that allow me to bring a perspective to electrical installation that can sit in between the architect, the client and that 25 year old to make the building better. Writing the book for the IET is a really big moment for me, I'm honoured to be able to offer the book I needed six or seven years ago. Making the transition between installer through designer to author feels progressively more exposed, you have to bring the sum of your knowledge to bear into a freeze-frame in a document. That's scary, a different kind of scary to maybe worrying if your cables are safe from the chippies – but still scary.

What advice would you give anyone leaving a very established career and entering electrical, as you did?

Again I have to return to the advice I wish I'd given myself 10 years ago, take time to get your head round business admin and accounting before you immerse yourself in the tools and the tech. You are not going to be as fast as that 25 year old so don't compete on price. Get a business head on you and work out what you can compete on; everything else - the tools, the training the marketing - should flow from that.

What advice would you give anyone looking to expand on their current business offering?

If we're talking about expansion of a bog-standard electrical installation business into one offering smart tech then I would say get yourself to some trade shows and take advantage of what's on offer from channels like the IET and Voltimum. Also more and more manufacturers are developing smart variations on their product lines and are offering demo and training to people like you who they badly need. This is probably a good way to start, don't be like me and pile in for the pricey NASA-style training.

Why cash is king in construction



Adam Fernandes, from UHY Hacker Young, provides advice about how to manage the accounting for your business ahead of the new tax year.

The construction industry is a volatile one and everyone knows cash is king... or do they?

All too often, I come across construction business owners obsessed with their turnover and I find myself repeating the old adage, 'turnover is vanity, profit is sanity, cash is king.'

But why is cash king?

Have you found yourself in the middle of a complex supply chain? Have you paid out on materials and labour costs and are yet to receive your initial deposit or valuation payment? When you are suffering from negative cash flow, situations like the above can take down even the most profitable of construction businesses and this is why cash flow is so important.

Understanding cash flow, dealing with the pinch points and planning for future projects are common challenges faced by construction businesses, so consider the following strategies:

Forecast Earnings:

Managing finances isn't everyone's cup of tea but forecasting earnings is a key aspect of operating a successful business. The ability to anticipate overall income and cash outflows over a given period of time provides business owners with comprehensive knowledge and transparency of what's going on.

You can identify where you may experience negative cash flows and whether you have sufficient cash resources to cover this or whether alternative finance is required to bridge the gap. Failing to recognise these pinch points can cost the business more than you realise. You can also plan for worst and best-case scenarios such as a client not paying on time or you needing more resources than anticipated. A cash flow forecast will help understand the impact of such events on the overall cash flow of the business and the possible outcome.

Technology has advanced considerably in the past decade so don't panic, you will not need to spend every night analysing an excel spreadsheet. There are now cloud-based products available that can link to your accounts system – streamlining the whole process.

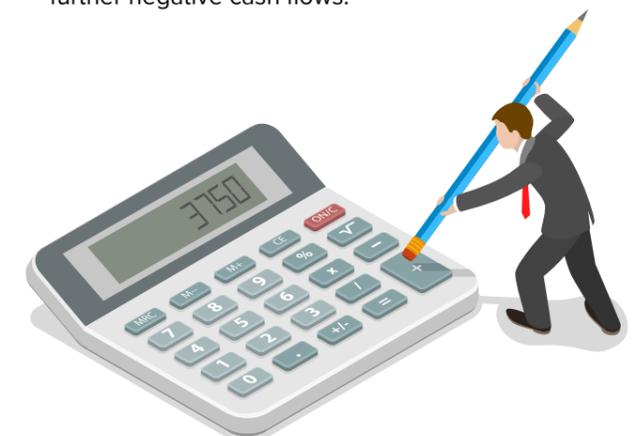
Schedule Planning:

There are a number of key 'forward-looking' steps that you need to take in order to be successful in construction – going into a job blind is a big NO. There are various risks a new project can bring, especially with a new client. Firstly, assessing the client's credit rating and ensuring you are comfortable with it is crucial.

Secondly, planning out the costs and billing deadlines to gain an understanding of project cash flow is good practice. To help you with this; ask questions such as:

- What milestones need to be completed and by when to meet billing deadlines?
- Can the costs be spread out or do you need to consider finance?
- What are the client's payments terms and are they known to pay on time?

Once these questions have been answered, the project manager(s) must have an understanding of expectation. If certain targets aren't met then billing could be delayed, causing further negative cash flows.



Efficient Operations:

Assuming there's enough cash and knowing there's enough cash are two very different things. Running efficient systems and operations can help circumvent those easily avoidable problems such as making last minute payments, payroll errors, submitting progress valuations late and chasing slow paying clients. Investing in good infrastructure for your business will set the foundations for future growth.

Technology plays a vital part in operating efficiently. As mentioned previously, there are cloud-based products available that can help you automate your finances, understand your profit margins, use on your mobile, automatically chase your clients for payment and so on. Platforms such as Xero and QuickBooks cost less than your weekly bacon roll and coffee and will probably be much better for your waistline!

Impact of New Legislation and Taxes:

When it comes to taxes, construction is an industry that has its complications. From CIS to VAT it can be a minefield and keeping up to date is crucial. The introduction of Making Tax Digital begins in April 2019. This new government initiative is another admin burden on small businesses and will require all businesses (eventually) to set up a digital tax account and file quarterly returns online. Whilst many business owners will sigh at the thought of this, there is a positive that you will have a greater understanding of your tax liabilities sooner rather than later.

Cash will always be king in this industry. The above strategies should help any construction business meet the cash flow challenges head on. With a solid grasp of job progress and cash flow you can keep projects moving forward with confidence.

If you would like to discuss your own specific circumstances, please contact our construction specialist, Adam Fernandes on 01462 687333 or email a.fernandes@uhy-uk.com.

Connected Systems video

Understanding the systems underpinning smart homes

In October 2016, we published our [Code of Practice for Connected Systems](#) Integration in Buildings. We're continuing to see a lot of interest around smart homes and the connected systems that are required to make a smart home work. However, despite the interest, there seems to be a lack of confidence in how to go about implementing such connected systems.



Code of Practice for Connected Systems

We explored the subject of connected systems in our video below. In the video, with Robert Llewellyn hosting, Lutron's Sam Woodward explores the concept of smart homes and how to turn the idea into reality.



We are currently working on a Guide to Smart Homes for Electricians, which is in the early stages of development. In the production of this Guide, we're working with organisations such as CEDIA, NAPIT, Certsure, Voltimum and Energenie, as well as electricians who currently offer smart home installation work. Our aim for the Guide is to provide electricians with the resources and information necessary to expand their current offering to include smart home installations.

We expect to be publishing a consultation document this year for you to review. Please keep an eye on Wiring Matters if you wish to take part in the consultation.

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