

Index

○ SPRING/SUMMER | ○ 2022

Newsletter of the
Commissioning Specialists Association
PROFICIENT PROFESSIONAL COMMISSIONING

*This Edition of Index is
sponsored by:*

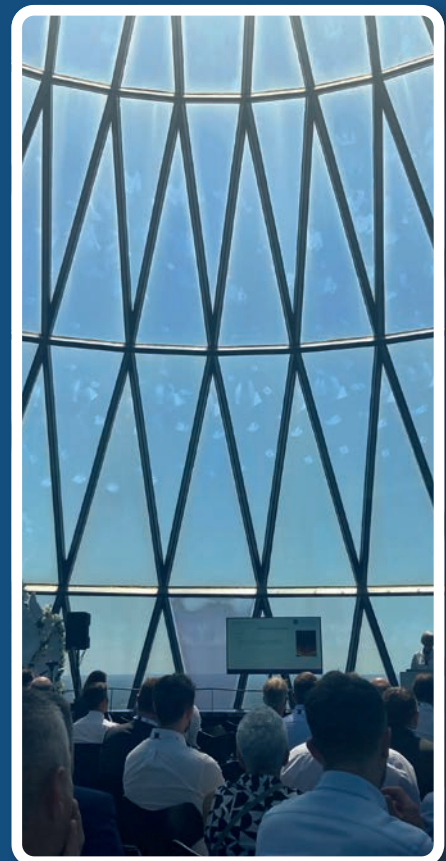
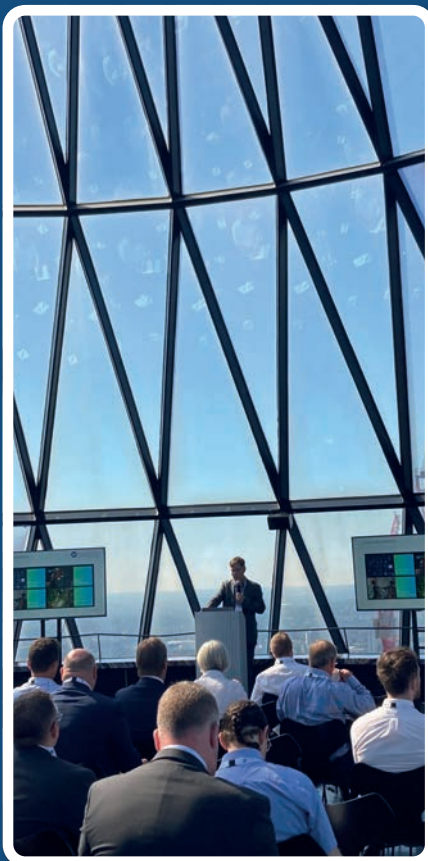


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- JULES' NEWS
- CHAIRMAN'S SAY
- AGM
- GALA AWARDS
- CSA Seminar
- And much, much more...



CSA MAKING BUILDINGS WORK SEMINAR 22 JUNE 2022 HELD AT THE GHERKIN LONDON EC3



CSA SOCIAL MEDIA #CSAHORSHAM or #COMMISSIONING

NEW MEMBERS We would like to welcome the following new members to the Association.

Corporate Members: UTAB, CROWN HOUSE TECHNOLOGIES

Associate members: ALBION VALVES UK LIMITED, PJW METERS, AMEON LIMITED

Individual Members: ELTON HUNT, LAIN HOLLAND, KENNY POLLOCK, PAUL BECKETT, CHARLIE HANCE, DAVID RAMSDALE, EWAN MAGILL, REECE MCCONDICHIE, NIXON SERVIDAD, ARTHUR PAGSIBIGAN, ROLANDO ACUNA, LUKE WEIR, DANIEL VILES, ZAK HALDANE, STEVEN SHAW, PETER ROWE, PHILIP FLYNN, JOSH WALKER, DAVID HANKEY, ALLAN RETURETO, KIAN FLANNAGAN, JACK DOUGHERTY, JOSEPH HINTON, SCOTT HARTLEY, JONNIE GIBSON, STEVEN SUNNUCKS, LUKE PENNALL, BEN CUNLIFFE, ADAM WALES, KYLE ROONEY, MANU JOHN.



Jules' News

Hi everyone and welcome to the Spring/Summer 2022 edition of Index.

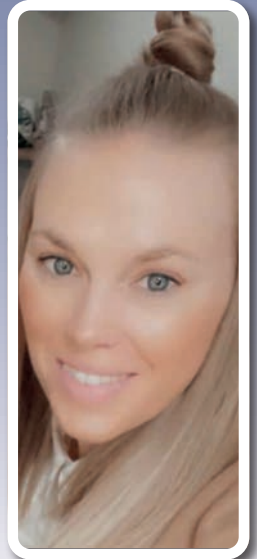
I would like to thank all those sponsors and attendees of the Making Buildings Work Seminar held on 22 June at the fantastic venue The Gherkin—Despite numerous set backs to this event such as Covid19 and rail strikes the event finally went ahead.



We would also like to introduce to you our newest team member Kate McIntyre. Kate joined us in April and is currently looking after the distance learning courses and the ITCM Courses. Kate joined the CSA team from an administration background. I worked for the UK biggest roofing sector (SIG Roofing Ltd) for 4 years as the Hub and Inventory manager, before that I worked in payroll for a company called STAR Computers also for 4 years. Kate was also a semi-professional footballer for Brighton & Hove Albion Women before transferring over to Lewes Women FC. She was signed up professionally by Fulham Ladies FC at the age of 6 and played for them for 16 years.

We have been busy chasing outstanding invoices both by phone and email, please note if you have not paid your subscription fees in full by the end of July we will need to start lapsing your memberships. Congratulations to all those who took and passed the grade 4 exam in May, again please note if you have not received your result yet your payment is still outstanding.

We now look forward to Gala Awards which again will be hosted at the Guoman Tower Hotel on 8th October please don't delay in booking your tickets and of course nominating your aspiring engineers and projects – remember you have to be in it to win it ! Nominations can be submitted on our dedicated gala website: <https://www.csa-awards.co.uk>



Distance Learning Courses A, B & C

Well Done to those listed below who have recently passed the DLC tests.

DLC A

ZAIN ABIDEEN, ZAC SMITH, MATTHEW DICKINSON, HARRISON RANSON, CIARAN DOCHERTY, HARVEY MCKAY, DAVID NICOL, LEWIS BALMER, DAVID ROTHWELL, RYAN WAUGH, GIOVANNI MEZZULLO, JAMES FLOODY.

DLC B

BRUCE HADDEN, JAMES RICHARDS, PRAVEEN RAJ, JONATHAN HUNT, CALLUM O'CONNER, STEVE CLIMPSON, SONNY HERRIDGE, DANIEL MURRAY, LEWIS KETT, CHARLIE HASSIN.

DLC C

ANDREW MARCH, THOMAS MILLER.

GRADE 4 EXAM RESULTS FROM MAY 2022 EXAM

Well Done to those listed below who have recently passed the Grade 4 Exam.

JACK HURST, JACK GIBSON, STEVEN CROSS, KEIRAN PATON, STEVE MCFADYEN, ANGEL SAYON, JEFFREY LE CRUZ, TOM TOWNLEY, MARK DERBYSHIRE, ASHWIN RAJASEKHARAN, ABHILASH VIJAYEN, JASON BRAVO, SHISH ZIYA, SAJID KHAN, ELIE YAFET.

The next Grade 4 Exam will be October 2022 date TBC Please email CSA office to book.

GRADE 5 PASSES

Congratulations to those listed who passed the GRADE 5 THESIS.

NIGEL TYRELL, SHAIKH ALTAMASH, MAZEN HUDHUD, PAUL RYAN.

News Flash

1st Commissioning Management Accreditation Awarded



The CSA are delighted to announce that we have awarded our first ever commissioning management accreditation to Thomas Dunn of Banyards, Tom over the years has worked his way up through a traditional path of completing the Distant Learning Courses, Grade 4 Exam and Grade 5 Thesis. This is a milestone for the CSA since we released the commissioning management grading system back in late 2021. Our CSA Chairman Neil Burdess visited Tom on the National Cycling Velodrome project he is working on to congratulate Tom and handover his CSA CM2 certificate.

Tom stated "I'm very happy to be awarded the first CM2 accreditation. I would also like to thank Banyards for their continued support in helping me progress my career and achieve my goals."



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CSA SOCIAL MEDIA PLEASE REMEMBER: #CSAHORSHAM

MAKING BUILDINGS WORK CSA SEMINAR THE GHERKIN, 22 JUNE 2022



MAKING BUILDINGS WORK CONFERENCE

The CSA's Making Buildings Work conference took place at the iconic Gherkin building in London on Wednesday 22nd June.



Why this conference and why now?

Commissioning is becoming increasingly important to clients and to the construction project teams that create assets for them. Why is this? Because in world of accelerating technological advancement, increasing building complexity, tightening regulatory constraints, growing consumer demand for quality, surging environmental consciousness, and an urgent need to de-carbonise buildings, it is impossible to consistently deliver required project outcomes without having a correctly executed commissioning process in place.

In recognition of this, a new best practice guide about the commissioning process and its management is about to be published by CIBSE and the CSA – Commissioning Code M: Management.

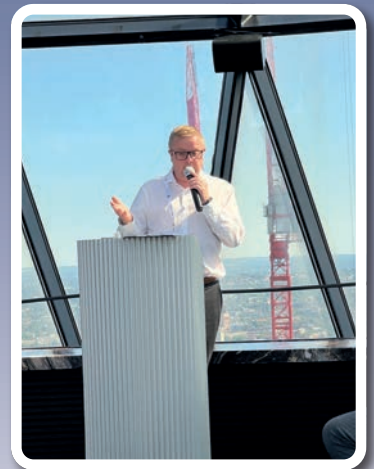
The aim of this conference was to present what a correctly executed commissioning process looks like, to illustrate some key things that project teams need to get right at different stages of the process and to consider.

What presentations were delivered?

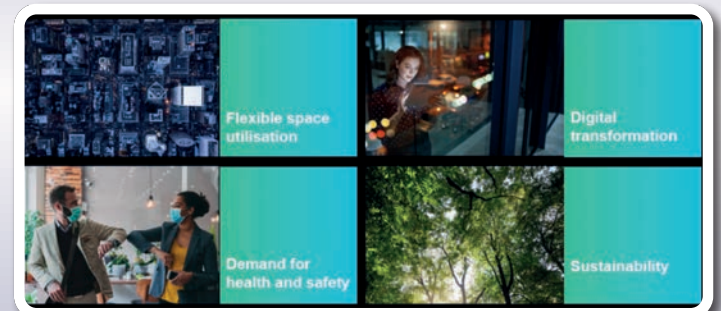
In his opening address, the current CSA Chairman Neil Burdess stated that the purpose of the CSA is to ensure commissioning is carried out to a high standard.

He then provided an overview of the CSA's grading system for commissioning managers, which can be used to find appropriate accredited competence for projects of varying sizes and complexities.

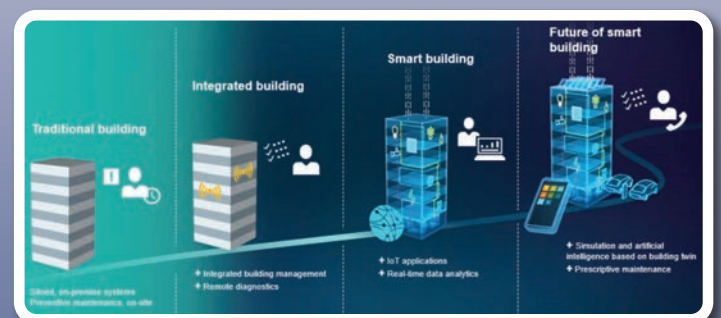
He concluded by stating that commissioning needs to be considered from the outset of a project.



Ian Ellis of Siemens Building Products then gave a presentation about Smart Buildings. He stated that these assets facilitate the following 4 things, thereby becoming an active contributor to the success of a business:



He then explained how Smart Buildings are evolving from isolated assets containing lots of disparate systems to physical assets that have digital twins, use open protocols, and are managed using real-time data. This is illustrated below:



Ian then provided an overview of how Building Management Systems are evolving as part of this intelligent infrastructure – to become a single point of access to look at and control everything in a building. The key components of this intelligent infrastructure are shown on the next page:



In concluding his presentation, Ian then proposed that some key things to be considered when delivering a Smart Building.

These are shown on the below.

- Define responsibilities for design, installation and commissioning
- The handover process needs to include network performance
- Define the networking topology system at an early stage
- Use Open Protocol devices
- Define the level of resilience and security that is required
- Define what BMS functions are required e.g. Data logging
- Involve the IT department at an early stage
- Establish the operating life of the systems
- Understand what level of client interaction is required
- Determine if there will be an overall MSI (Master systems integrator)
- Things are not always plug & play, so get experienced people involved
- Ensure there are backups & clarity about who owns the network database
- More inter-linking means more costs, so make sure they are of benefit

The presentation from Adam Muggleton, Global Director of Commissioning for AESG started with him asking the audience “Why are zero-defect, high-performance buildings not normally delivered?”

Adam informed the audience that for this to happen, 4 key things need to happen:

- The client must ask for a building properly
- The building needs to be designed and specified properly
- The building has to be constructed properly
- The building and all the systems in it must be proven to perform to the specified requirements

He provided a simple definition of commissioning – “Trust, but verify”. He then stated that commissioning seeks to answer the question “How” e.g. “How will this building be zero defect”, “How will this building meet specified performance”.

Adam proposed that half of building deficiencies have their origin in the design stage of project. In addressing

this, he then referred to the new Commissioning Code M: Management which is about to be published by CIBSE and the CSA. This guide to the commissioning process and its management contains 25 commissioning activities that clients and their construction project needs need to get right – 11 of which need to take place before a project starts on site. This is as illustrated below.



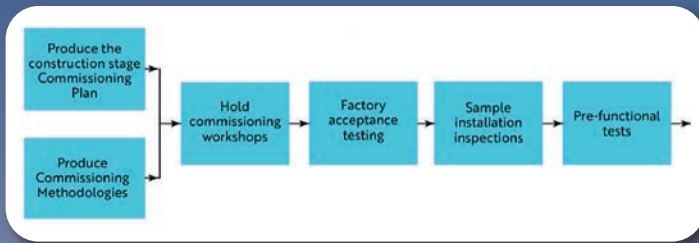
Ted Pilbeam, Volker Fitzpatrick’s Building Services & Sustainability Director commenced his presentation by stating how important it is to make clients aware that commissioning is a legal obligation – making reference to the latest versions of the Building Regulations’ Approved Documents as he did so.

He then mentioned the Building Safety Act 2022, which represents the biggest change in the regulation of the UK built environment in a generation.

This Act imposes new dutyholder roles on clients, designers and contractors, aimed at ensuring compliance with the Building Regulations; it creates a new role of Building Safety Regulator, embedded within the Health and Safety Executive (HSE);, and it introduces three stop-go ‘gateways’ governing how higher risk buildings are planned, designed and constructed and how any major renovations are undertaken.



Ted then talked about the importance of getting the front-end of the site-based stage of commissioning right, referring to the 6 activities in Commissioning Code M shown on the next page:



He stated that commissioning does not replace the process of quality assurance, which needs to be carried out during manufacture and construction as part of normal, good engineering practice. He did however propose that installation inspections led by the commissioning manager (CxM) can help confirm that systems are ready to advance to the next stage of the on-site commissioning process – pre-functional testing.

Historically, this pre-functional testing stage has often been referred to as pre-commissioning and/or static testing. As systems are set to work at this stage, Ted stated that working practices must be adopted that maintain high standards of health and safety

Liz Day of Chesterfield WT Consultants started her presentation about pre-commissioning cleaning best practice by stating there are 4 reasons why we do it:

1. Remove particulate matter
2. Ensure that pipework surface is in acceptable/clean/ stable condition
3. Create good foundations for microbiological control
4. Add chemicals to prevent corrosion and allow microbiological control



She stated that the first time is the best time to get this right.

Liz highlighted the need have good storage and installation practices in order maintain the cleanliness of pipework.

She also highlighted the need to avoid filling, draining and re-filling systems multiple times because this leads to flash corrosion.



When conducting off-site pressure testing, she also stated that particular care needs to be taken to maintain the integrity of internal surfaces of pipework or equipment that has become wet.

When talking about choosing between a conventional cleaning method or a filtration cleaning method for a project, Liz proposed that factors such as those shown on the right need to be considered.

If a conventional flushing and cleaning method is adopted, Liz highlighted the importance of the project team having a shared understanding of what specific stages need to be included in the overall process.

She also stated how important it is to have the correct flushing velocities and to adopt the correct sampling methodologies.

- Materials of construction
- Duration since initial fill – at the time of cleaning
- System cleanliness & care before cleaning
- Availability of appropriate filter
- Sectional cleaning requirements
- Terminal unit characteristics
- Experience of flushing team

To conclude her presentation, Liz stated that it is essential that systems are handed over with full auditable records, such as sectional fill dates, flow readings, backflushing records, strainer cleaning records, chemical cleaning test results, chemistry test results, microbiological test results and trend information

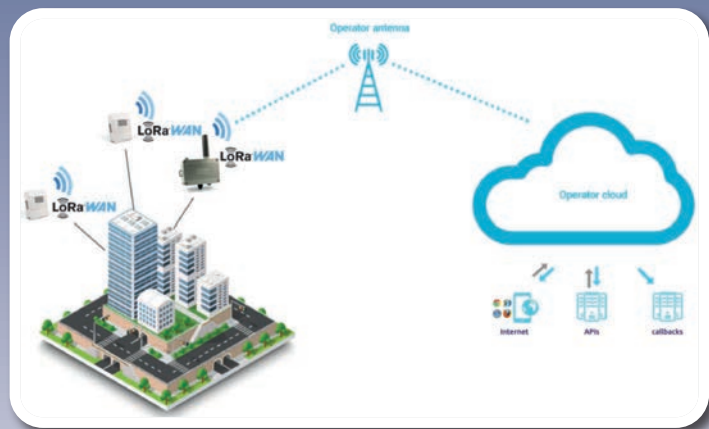
Terry Sharp, Immediate Past-president of the Building Controls Industry Association (BCIA), talked about making Smart Buildings work by integrating building services with other systems and by using the Internet of Things (IoT) to facilitate affordable data exchange.

He first illustrated the benefits that Smart Buildings can generate such as:

- Employers attracting and retaining the best staff
- Flexible and remote working
- Lower utility and maintenance costs
- Lower environmental impact
- More efficient billing of tenants
- Automated profiling of users
- Better data sharing



He then looked at emerging technologies, focusing in particular on LoRaWAN – an open networking protocol designed to wirelessly connect ‘things’ to the internet in regional, national or global networks. In this type of network, traditional outstations will disappear because devices will connect directly to the cloud. This topography will also have networks that will auto-discover. A LoRaWAN is illustrated below:



Terry concluded his presentation by stating that planning and control are key making Smart Buildings work, providing the 4 recommendations shown below.

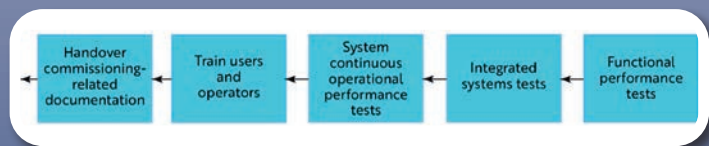
- **Take the time, cost and effort to clearly specify what is required at the start of the project**
- **Properly evaluate cost saving opportunities that may arise**
- **Take appropriate consideration of operating costs**
- **Ensure there is proper technical supervision of contract delivery**

Nick Till, Managing Director of Banyards then delivered a presentation about commissioning management and handover.

He stated that buildings need to be operationally ready at handover, perform to meet the specified needs of the people that use, manage, operate and maintain them, and function safely and efficiently in the long-term



This requires good management of the following on-site commissioning activities from the new CIBSE Commissioning Code M – which continue the sequence established earlier by Ted Pilbeam:



Nick stated that a well-executed commissioning process, which starts during the design stage of a project, will help a client and its appointed construction project team achieve

specified project outcomes. This is because the following types of risk will be managed much better:

Inaccurate and un-reviewed design information	Unrealistic commissioning programming and costing
Incomplete, incorrect, or out-of-sequence installation	Uncontrolled flushing and water treatment
Poor BMS function testing/witnessing	Poor metering strategy, testing and witnessing
Lack of acoustic testing and witnessing	Poor control of statutory authority testing
Poor functional and environment testing / witnessing	Poor witnessing of cause and effect and 3rd party life safety interfaces
Lack of control and witnessing of integrated system testing	Poorly controlled handover documentation and training

Nick then talked about the importance of commissioning-related handover documentation in successful project delivery.

This documentation includes records such as those shown below:

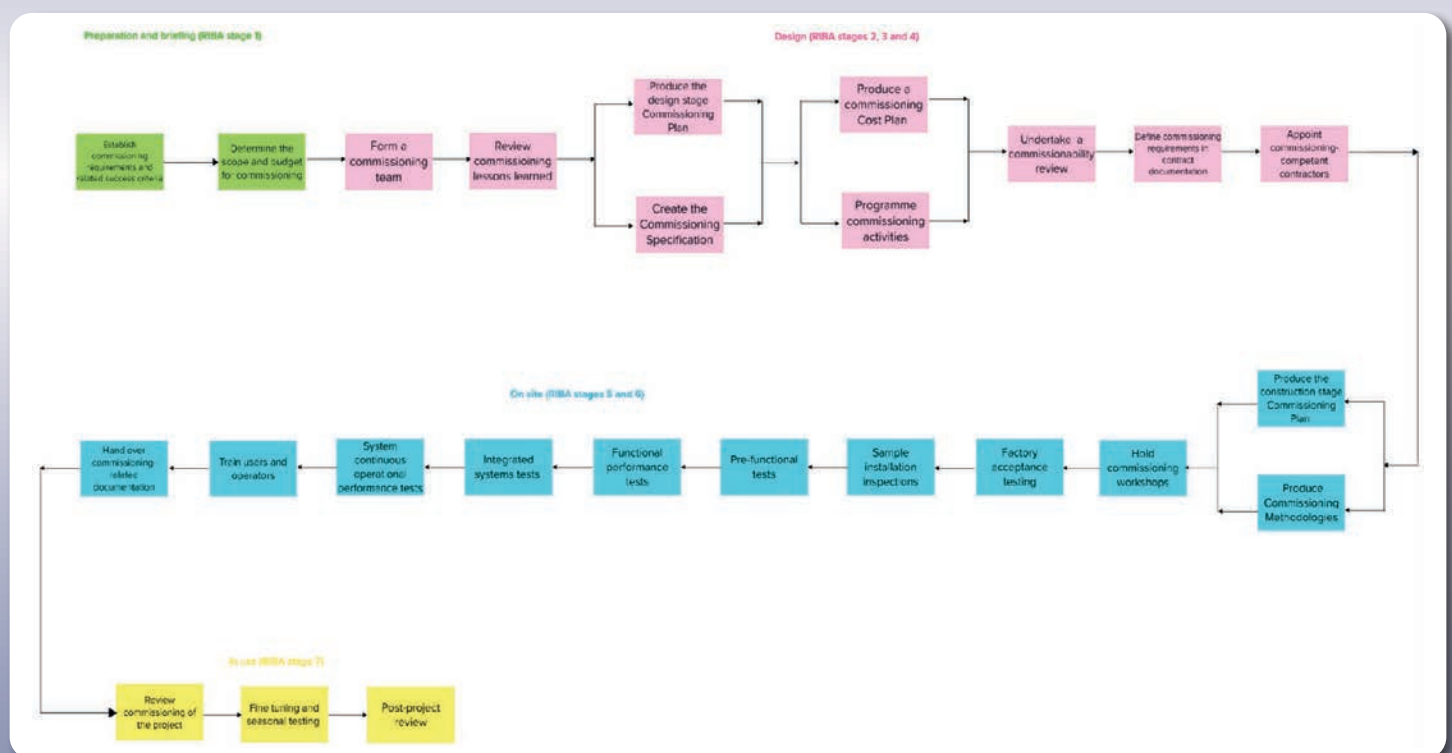
- **Fire alarm certificate BS:5839 (Design and Installation)**
- **Emergency lighting certification**
- **Fire damper drop-test schedule and marked-up drawings**
- **LPC certification**
- **NIC EIC completion certification**
- **Chlorination certification**
- **Closed-water system sample results**
- **Pressure vessel test-sheets**
- **Above and below ground drainage stack tests and CCTV surveys**
- **Part L Envelope testing**
- **Building Control Letter of Completion**

He concluded his presentation by proposing the following 4 success factors for the appointment of a commissioning management specialist:

1. Ensure Commissioning Management is thought about at an early stage
2. Ensure the company is a member of the Commissioning Specialist Association
3. Commissioning Management duties need to range from design through to post occupancy
4. Ensure that the correct Commissioning Management role is procured for a project

Summary of the day

Commissioning is an assurance process that starts during pre-design and continues into a building's operation life – as illustrated below:



Commissioning management is based on the following principles:

- Define what performance outcomes need to be achieved at the start of a project
- Establish a plan of action to achieve these outcomes
- Continuously verify and record that all decisions made, and all actions taken, are enabling these outcomes to be achieved

Commissioning is a collaborative endeavour that requires ownership and accountability on both the client and delivery sides of a project. Success is dependent on having a shared understanding of what the overall commissioning process looks like. Commissioning also needs skill, care and discipline to do what is required at each stage before progressing to the next.

Celebrate your achievements
Celebrate your team
Celebrate your business
Celebrate with us



Recognising and Rewarding Commissioning Excellence

Following the huge success of past CSA Awards Ceremonies, 2022 will again see the sector come together in celebrating the wonderful achievements of commissioning businesses, large and small, on 6th October at The Tower Hotel, St Katherine's Way, London.

If you or your company have something to shout about, these awards provide the perfect platform to get your accomplishments noticed. Check out the categories opposite and see which ones you will be entering! Entry is easy, completely free of charge and you can submit as many nominations as you like. Just visit www.csa-awards.co.uk to complete an online entry form... and if selected as a Finalist, enjoy some fantastic publicity as we count down to the Gala Awards Ceremony.

CATEGORIES

- PROJECT OF THE YEAR
- PRODUCT/SERVICE INNOVATION OF THE YEAR
- COMMISSIONING PROVIDER OF THE YEAR
- COMMISSIONING MANAGER OF THE YEAR
- INVESTMENT IN TRAINING AWARD
- STUDENT OF THE YEAR
- COMMISSIONING ENGINEER OF THE YEAR
- LIFETIME CONTRIBUTION AWARD

EVENT CALENDAR

NOMINATIONS OPEN - 14th March 2022

NOMINATIONS CLOSE - 12th August 2022

JUDGING SESSION - Late August 2022

FINALISTS ANNOUNCED - 7th September 2022

WINNERS ANNOUNCED - 6th October 2022

EVENT PARTNERS



www.csa-awards.co.uk

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Chairman's Say



So, after just 8 months in my position as the Commissioning Specialist Association (CSA) chairman I thought for this release of the CSA's Index I would give all our members an update on what we have achieved so far.

At the 2021 AGM / CSA Awards we said we would:

- Develop the CSA's offerings – **Ongoing**
- Future proofing our systems with online exams **✗**
- Online payment systems **✓**
- Downloadable Content **✓**
- Develop the commissioning management grading system **✓**
- Work alongside CIBSE with the development of Code M Commissioning Management **✓**
- Updates to CIBSE Code A&W – **Planned**
- Making Buildings Work conference **✓**
- New active members on the CSA committees **✓**
- Advanced Commissioning Management Training course (CM3 / G7) – **Ongoing**
- Improved visibility on LinkedIn – **Ongoing**
- Continue to develop GCC Chapters – **Ongoing**
- Continue to push the CSA to the forefront of the industry – **Ongoing**

To date we have made some really good progress on what we set out to achieve, online payments are now available for yearly membership fees and downloadable content including the commissioning engineer's compendium and we will continue to develop online payments for other CSA functions in the future.

Thanks to Paul Brown and Lee Hewitt, who as a team we have developed the CSA's commissioning management accreditation system which is now live and available to all members. The new commissioning management accreditation system sets out to demonstrate competency and experience while satisfying the criteria we have set out, this includes submitting a CV that details the candidates experience including their professional qualifications, the number of years they have worked as a commissioning manager, their project experience, client references along with a detailed dissertation on the candidates commissioning management experience that covers each stage of the commissioning managers duties along with the obstacles they have overcome, the process for candidates concludes with an online interview with the CSA committee.

To highlight a few questions, we have recently been asked surrounding the commissioning management accreditation system, CM1 Commissioning Manager aligns with Grade 5, CM2 Senior Commissioning Manager aligns with Grade 6 and CM3 Project commissioning manager will align with the Advanced Commissioning Management Training course (G7) that is currently under development and due to be released Q4 of 2022. The introduction to commissioning management (ITCM) course must be completed within 12 months of being awarded a CM grade, candidates that have already completed a G5 thesis do not need to complete a detailed dissertation on their commissioning management experience.

Next update, we have been developing CIBSE Commissioning Management Code M, working alongside key companies and individuals in a steering group on this joint publication between the CSA and CIBSE which was a brilliant experience and testament to great collaboration between CIBSE and the CSA. The new code which is due to be released very soon addresses commissioning processes taking into account accelerating technological advancement, increasing building complexity, tightening regulatory constraints, growing consumer demand for quality, surging environmental consciousness, and an urgent need to de-carbonise buildings. All of which will be impossible to deliver without having a correctly executed commissioning process in place which the new code now sets out for the future of commissioning management.

Following on from the re-write of CIBSE Commissioning Management Code M we have taken this opportunity to tweak the introduction to commissioning management course (ITCM) this ensures we are delivering our training courses to the latest guides. Further-more, our advanced commissioning management course (CM3/G7) which is being developed by Tony Anderson is near completion with some final amendments to the new CIBSE Commissioning Code M taking place, both of these will be released later this year so watch this space!



Next on the agenda for our partnership with CIBSE is to redevelop CIBSE Code A and BSRIA BG49, the CSA committee will be looking for volunteers who are classed as industry experts within Air system commissioning especially with experience within advancements in technology. If you feel you can help the CSA/CIBSE in this area, please email the CSA office stating your interest.



On the 22nd June we hosted our first ever CSA conference “Making Buildings Work” which took place at the top of the iconic Gherkin building in London with it’s amazing views. The aim of this conference was to present what a correctly executed commissioning process looks like and to illustrate some key things that project teams need to get right at different stages of the process. This highlighted that commissioning needs to be considered from the outset of every project. A special thanks to all the speakers that delivered some excellent presentations, Keith Barker for the dedication in making this event happen from the initial idea, through to the end of the event in

which the CSA’s aims of the day in delivering fully functional buildings from design stage all the way through to soft landings and seasonal testing was met with thanks from the attendees. Also with thanks to Touchwave media for organising the event with us and to the CSA office.

GCC CHAIRMAN’S UPDATE

2021 / 22 for the GCC CSA committee has been a busy period as we continue to raise our profile, awareness and professional standards in the Middle East’s built environment.

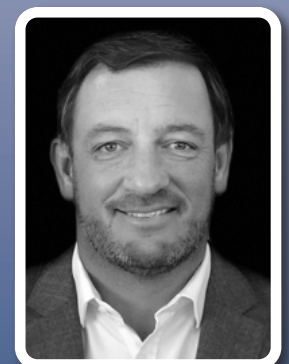
Having refreshed the GCC website LinkedIn followers have continued to rise, online webinars have taken place discussing related topics, and our chairman was invited to be a panellist for a “Value Engineering Online Summit”, sharing commissioning insights with some of the industry’s leading experts.

Our Vice Chairman, Mr Soubhi, and his application review team have seen a steady increase in applicants over the same period last year. Similarly, the committee have hosted several Grade 4 Exams in the same period.

Andy Bray has taken ownership of producing benchmark Commissioning Specification(s) that clearly define expected scope and output dependent on client appointment. Once approved, these specifications are intended to be “free issued” to the region’s leading MEP consultants.

With the involvement with, and introduction of the new CM grading system we look forward to further increasing our profile as we enter 2023.

Lee Hewitt	Core Emirates – Chairman
Soubhi Chawaf	T&C Technologies – Vice Chairman
Martin Williamson	ASEG – Committee Member
Ian Fail-Brown	SESC Group – Committee Member
Jhun Lachica	Sutton Comm Mgt Consultancy – Committee Member
Mohamed Saber	CSI Commissioning – Committee Member
Andy Bray	CML International – Committee Member



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