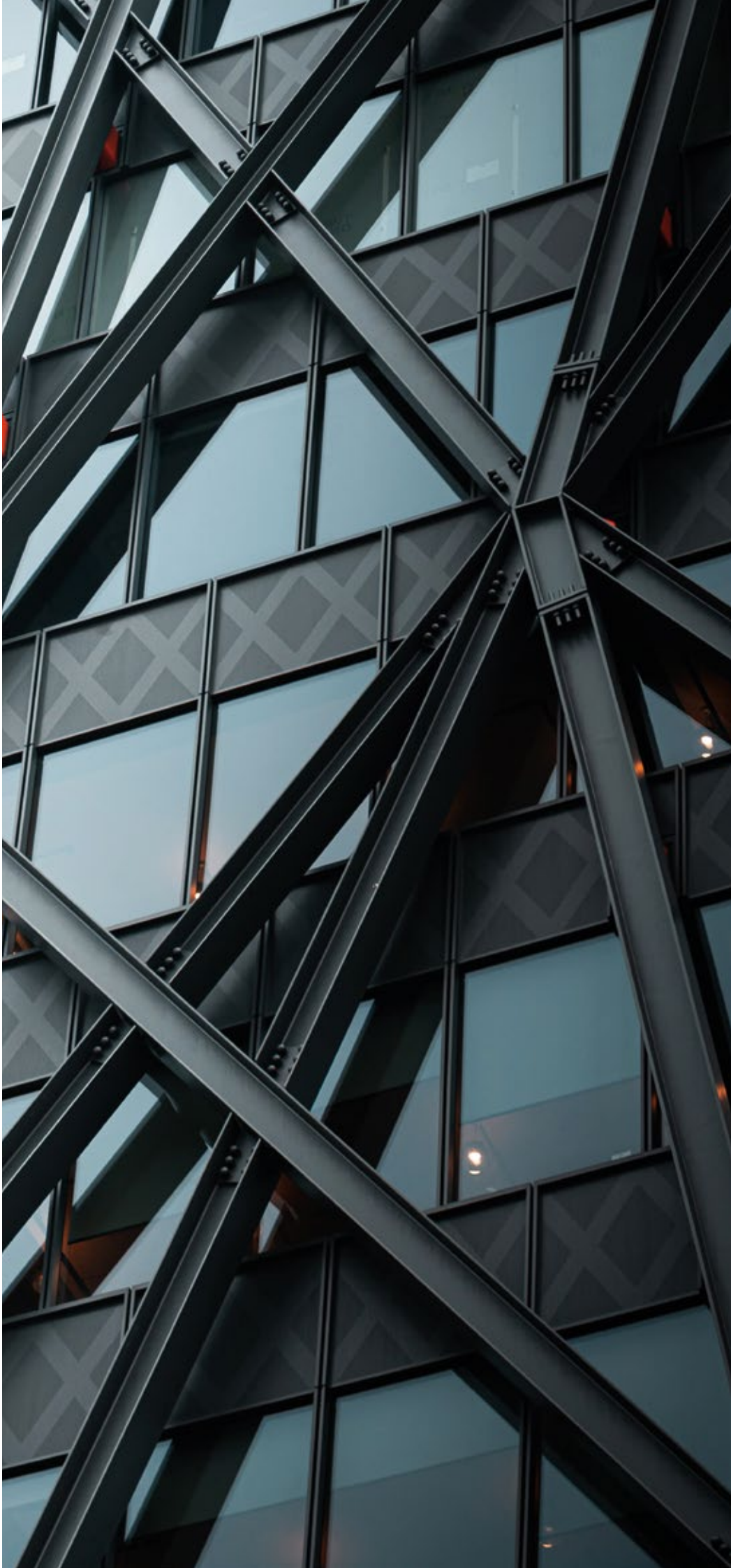
Architectural Technology Journal



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AT Awards 2020 open for submissions in February

The AT Awards open for submissions on 3 February 2020 to include the following Awards:

- Awards for Excellence in Architectural Technology
- Student Awards for Excellence in Architectural Technology
- Chartered Architectural Technologist of the Year

Full details and application forms will be on the website. Winners will be announced and presented at the AT Awards in September 2020. To find out about this year's event and winners please visit our YouTube channel, youtube.com/ciatechnologist for a series of films.

The AT Awards are recognised as the premier accolades that demonstrate outstanding achievement in Architectural Technology and celebrate the technology of architecture. The event this year was held on 13 September and was hosted by the President, Alex Naraian and Matt Allwright. Details on this can be found in the Annual Review or in the AT Awards section on our website.

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Editor
Adam Endacott
editor@ciat.org.uk
+44(0)20 7278 2206

Advertising
Donna Chappell
advertising@ciat.org.uk
+44(0)20 7278 2206

Published by
CIAT, 397 City Road,
London, EC1V 1NH UK
ciat.org.uk

Online
/Chartered Institute of Architectural Technologists
@CIATechnologist
/CIATechnologist
/CIATechnologist
/CIATechnologist

President
Eddie Weir PCIAT
president@ciat.org.uk

Chief Executive
Francesca Berriman MBE HonDTech
berriman@ciat.org.uk

Practice & Technical Director
Diane Dale
diane@ciat.org.uk

Education Director & International Director
Tara Page
tara@ciat.org.uk

Membership Director
James Banks
james@ciat.org.uk

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Circadian rhythms

Words by: Building Research Establishment (BRE)

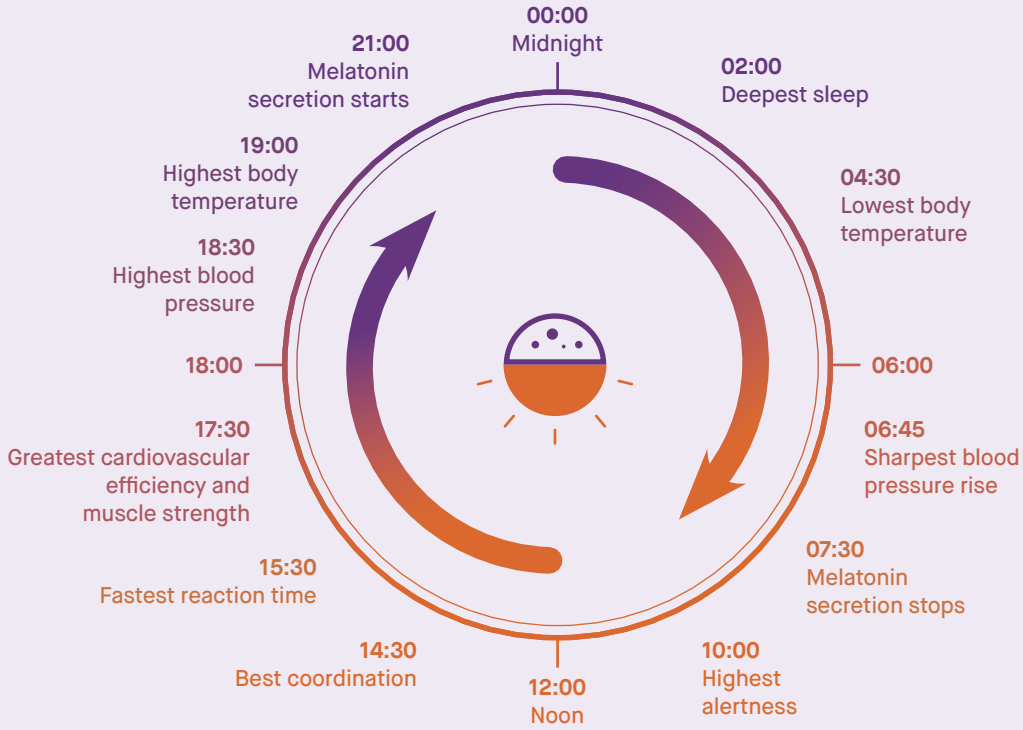
A study of 23 people working in an open-plan office has been carried out by research scientists at BRE, with BRE Trust and CIBSE funding, to translate experimental knowledge about the effects of lighting in the workplace into real-world good practice. A BRE Trust report summarising this project and providing advice on circadian lighting is now available.

Circadian rhythms control human alertness, sleep and the release of hormones. Daytime exposure to light, especially blue light, helps synchronise the circadian clock, enabling us to feel alert during the day and sleepy at night. Many people work in poorly daylit spaces with relatively low levels of electric light, where it may be hard for their bodies to maintain their circadian rhythms.

Dynamic 'circadian' lighting is being marketed using dimmable, colour-tuning LEDs to give brighter, bluer light in the middle of the day, and dimmer light – with less blue – later in the day when it is time to relax. However, little or no research has been done on the best way to control this tuneable lighting under real-world conditions. Research was needed to help translate experimental knowledge into practice and investigate the effects of dynamic lighting and its timing on how people feel (i.e. their subjective assessments), and their activities and reported sleep.

What are circadian rhythms?

Circadian rhythms are physical, mental and behavioural changes that follow a daily cycle. Found in most living things, they respond primarily to light and darkness in an organism's environment. Sleeping at night and being awake during the day is an example of a light-related circadian rhythm.



Lighting conditions investigated

This research took the form of a BRE field study, with 23 participants working in an open-plan office at the University of East Anglia. Four conditions were administered over several weeks during winter months:

Condition 1
Old constant fluorescent lighting – i.e. the office's existing lighting, from 19 February to 2 March 2018.

Condition 2
New dynamic LED system – with **variable** LED lighting at a ***lower*** level, from 12-23 March 2018.

Condition 3
New dynamic LED system – with **variable** LED lighting at a ***higher*** level, from 12-23 November 2018.

Condition 4
New dynamic LED system – set up to provide **constant** lighting, from 3-14 December 2018.

Daylight and solar shading guidance

One way of providing circadian lighting is the abundant provision of daylight in buildings. This can also lead to issues of unwanted solar heat gain and glare unless carefully designed solar shading is provided.

An additional objective of this project, therefore, was to complete production of BRE guidance documents on solar shading. These were a Design manual for solar shading and two BRE information papers on retrofitting solar shading and control of solar shading – available from brebookshop.com

Factors that were measured

Site measurements, lighting monitoring and computer modelling were combined with subjective and objective measures of performance, including questionnaires, regular pop-up questions and computer-based performance tests, along with the monitoring of light exposure and level of activity of participants using activity tracking watches.

The responses of the participants to questions and computer-based tests were assessed to identify links between key participant performance indicators – subjective alertness, reaction time and concentration – and the measurement and calculation results of circadian light metrics for each of the four lighting conditions.

Participant answers to general questionnaires following each lighting condition were also analysed and compared to assess the potential impacts of variable lighting. In addition, these results were correlated with the activity level data and the measurements of the site's environmental conditions – temperature and relative humidity.

Research findings

Greater alertness
The average scores for subjective alertness were significantly better with the new dynamic LED system (Condition 2), than with the old constant fluorescent lighting (Condition 1). Comparisons of average subjective alertness scores with the LED systems set up to provide variable lighting (Condition 3), and constant lighting (Condition 4), revealed no statistically significant differences.

Extra light not a factor
Most participants felt more alert under the dynamic LED lighting in Condition 2 compared to the constant fluorescent lighting in Condition 1, but this also happened for the small number of people who received less light in Condition 2. The increase in alertness did not depend significantly on how much extra light people had with the LEDs. All participants received more light in Condition 3, compared to Condition 4, and the increase in light level was much more uniform across participants compared to the first conditions. However, the higher light levels in Condition 3 did not lead to higher scores, on average, for subjective alertness – only half of the participants felt more alert under the dynamic LED lighting (Condition 3).

Other factors not affected
There were no statistically significant differences in test scores for reaction time and concentration and in sleep metrics between the two conditions tested in each phase of the project.

Preference for dynamic lighting
In each phase, participants were asked whether they would prefer dynamic or constant lighting. On average, just over half of them preferred dynamic lighting for their office, typically brighter in the morning and following the variation of natural light outdoors throughout the day. Just under one third preferred the constant lighting.

More questions to answer

Overall, there is still considerable uncertainty about how much light is required for circadian entrainment – i.e. for a person's circadian rhythm to align with the rhythms of light. People vary in their normal daily routines and in how much daylight they are exposed to. In addition, even in a space with 'uniform' electric lighting some people may receive significantly more light into their eyes than others, depending on which way they face.

More research is therefore still needed to understand better the potential impacts of lighting on circadian entrainment and wellbeing in real-life situations, and how to best quantify these in order to produce clear recommendations and guidelines for lighting than can support healthy circadian rhythms and wellbeing.

Outputs

The project findings are described in detail in various outputs, including the following publications:

1. BRE Trust report summarising this project, which is available at: bretrust.org.uk/knowledgehub/health-wellbeing-safety/circadian-rhythms/
2. Design manual for solar shading (BRE Trust Report) and two BRE information papers on retrofitting solar shading and control of solar shading – brebookshop.com
3. CIBSE Journal article (cibsejournal.com/technical/evaluating-dynamic-lighting),
4. Draft papers on findings of the field study for publication in Lighting Research and Technology scientific journal. ■

Designing for change: using CO_2 to make architecture greener

Words by Dr Anthea Blackburn, Senior Scientist – Catalyst Development, Econic Technologies

Dr Anthea Blackburn
Senior Scientist

The publication of the Committee on Climate Change (CCC)'s latest report, calling for a shift to an ambitious, yet much-needed, net zero carbon emissions target in the UK has highlighted a growing awareness of the need to act now to slow down climate change.

Following the calls for the UK to reduce carbon emissions to net zero by 2050, a range of businesses and industries will need to assess their current impact on the planet. With mounting public pressure, as evidenced by the Extinction Rebellion protests in April this year, companies are taking action to ensure that their operations are greener. Unilever, for instance, has reduced its carbon emissions by 39% per tonne of product manufactured since 2008, whilst L'Oreal and Pepsi are working towards using 100% reusable, recyclable or compostable packaging by 2025.

The 2050 target for net zero is a formidable challenge, but far from an impossible goal, and the built environment sector will play a key role in helping the UK to achieve this. Over recent years, we have seen an increasing trend towards green building design and construction techniques, including the use of lower volatile organic compound building materials, offsite framing and the use of passive solar building design.

Whilst these efforts are a positive step forward, much more will need to be done if we are to reach net zero carbon within the next three decades. The steps taken so far to become greener are commendable, but the property and construction sectors still have a considerable impact upon the planet – it's estimated that as much as 40% of carbon emissions come from buildings (most of which is from the manufacture of construction products and materials) and 50% of the world's raw material consumption is in the development and use of building stock.

Time is of the essence if we are to limit the planet's temperature rise to just 1.5°C, and it's vital to address all elements of our building stock's carbon lifecycle before 2050. The UK Government is implementing legislation to help guide the architecture and construction sectors towards becoming greener, not least through the recent announcement of a ban on the use of solid fuel heaters in new-build properties. However, further efforts need to be made in order to make the dramatic changes necessary.

However, what if the solution to this problem was, quite literally, all around us? Indeed, the answer to calls to reach net zero carbon emissions could lie in the widely maligned molecule itself: CO_2. In fact, CO_2 could be used to make a variety of products and materials, including those used in building design and construction. After all, atmospheric CO_2 is readily available and, thanks to developments in catalytic science, could be captured and used to create polyurethane in a process that replaces up to 50% of the oil-based raw materials.

From the rigid foam insulations that reduce heat loss, to the coatings used to protect flooring and the exteriors of buildings, polyurethane products are commonplace in building construction and design. If polyurethane made with waste CO_2 was to be widely adopted by the architectural and construction sectors, net carbon

emissions could be vastly reduced – potentially by up to four million cars' worth each year. Not only does the production of polyurethane utilising CO_2 as a raw material help to reduce net carbon emissions, through reduction in the use of, and therefore production of, traditional oil-based alternatives as a feedstock, further CO_2 emissions are also prevented.

When considering how to make building design greener, many Architectural Technology professionals may look to consider using bio-alternatives, whether these be natural materials such as cork and mineral wools, or bio-based polyols made using plant oils. However, the production of these materials places a vast strain on agricultural resources, and are often costly for manufacturers to import. What's more, polyurethane materials made using captured waste CO_2 typically perform better than these biodegradable alternatives – rigid polyurethane foams, for example, require less than half the amount of cork or mineral wool to provide the same degree of insulation, and also have been found to have improved flame retardancy properties. Other benefits to these products include good rigidity; increased abrasion resistance; and improved chemical resistance, meaning that they are able to withstand the test of time.

Making use of captured CO_2 in building development is not limited to the production of polyurethane, however: concrete, one of the biggest contributors to the construction sector's emissions, can also be manufactured using waste CO_2. Once such example is Carbicrete, whose technology enables the production of cement-free, carbon-negative concrete, reducing greenhouse gas emissions by replacing cement in the mix with a steel slag (a by-product of the steel industry, cured with CO_2 to make it carbon-negative) and capturing CO_2 in the curing process. Carbicrete's finished product is not only greener, but is also more durable and cost-effective than cement-based concrete.

Carbon capture and utilisation technology's green applications have also been realised by Mineral Carbonation International, who convert CO_2 into stable, solid carbonate materials, which are then used to produce a range of building materials, including high performance concrete, plasterboards and electrical insulation. Further developments in this field are also coming down the track, including spray polyurethane foams, which will offer similar benefits of improved insulation and fire resistance to rigid foams made using CO_2.

Now more than ever, climate change is an issue that requires drastic attention. From the school strikes and Extinction Rebellion protests, to the publication of the CCC report, the UK's Government, businesses and public must make changes to lessen the impact we have on our planet. Reaching the target of net zero carbon emissions may seem a long way off, but if all industries take the appropriate measures to lower their carbon footprints, progress can be made. For the architectural and property sectors, making use of captured CO_2 as a raw material could be one way to not only reduce emissions in building design and construction, but also realise the product benefits offered by CO_2. With a goal of 2050 to reach, the sector will need to act now and adopt these innovative techniques, in order to help the UK reach net zero carbon. ■

Aurora Log Homes

Words by: Carla O'Kane MCIAT, Montgomery Irwin Architecture & Design

The North Antrim coastline boasts stunning views and tourist attractions. Visitors to Bushmills and the wider Causeway coast region can now enjoy feature accommodation in these exclusive log cabins.

From the offset, this extraordinary location demanded a unique design. The elevated site sits within a rugged landscape and enjoys panoramic views of the coastline. The clients (Archie and Pearl) were hands on throughout the project and aimed to create an unforgettable experience for their guests. Aurora's twin cabins are the first of their kind in Ireland and offer a distinctive combination of raw beauty and modern luxury for year-round escapes.

The planning process was challenging as the site lies within the distinctive landscape setting of the Giants Causeway World Heritage Site. The siting and design of the houses integrates with the surrounding landscape. This form, scale and mass reflect the character of rural architecture in the region. However, the construction and detailing is very different.

After months of enquires, the clients decided to work with Pioneer Log Homes based in British Columbia, Canada. Both cabins were erected primarily in Canada by Pioneer; this process eliminates issues on site at a later stage. The company site is close in proximity to an endless supply of high quality Spruce, Douglas fir and Western red cedar. Aurora's twin cabins were constructed using Western Red Cedar logs, their properties include resistance to rot and insects, withstanding severe climate conditions and impressive thermal qualities – not to mention their visual appeal and wonderful aroma!

Pioneer have their own in-house design team who corresponded with us throughout the design and construction stages. Drawings were produced and sent across for liaison with local authorities. We developed a close working relationship with Building Control and outside consultants, in particular the SAP assessor and engineer. Pioneer carried out their own calculations to 'test' the proposals and when satisfied the scheme worked structurally, our task was to interpret this information to comply with Northern Ireland regulations.

Pioneer's impressive log inventory allows their lumberjacks to hand choose each log specific to the project. Prior to construction, the logs are seasoned and air dried to help control shrinking.

External walls and log rafters were erected to complete the main structure, each log is then referenced

and the structure dissembled and 'reverse packed' for shipping. This results in the bottom logs arriving on site first to assist the build process.

M&E proved to be another challenging task. Confirmed layouts were essential before the kits were shipped to Northern Ireland. Pioneer were able to plane the log walls locally to provide a flat surface for mounting faceplates. The log walls were bored to enable wiring, these works were completed in Canada.

During this time, our drawings were issued to our main contractor to enable pouring of foundations floor construction and co-ordination of services. The foundation to floor detail was very specific and required galvanised 16mm holding down rods cast within the foundations. Tolerance was minimal; any discrepancies along the vertical plane of the rods would cause problems when placing the walls. An upstand was formed directly below the external wall footprint to provide a base for the first log (half).

A team of master joiners from Pioneer made the trip to erect the walls and main roof structure.

Once the first log (half) had been placed, the whole logs can be stacked on top of one another to form the walls. A strip of insulated mineral wool is notched within the logs top and bottom where they meet. We worked closely with Pioneer to develop bespoke details which not only complement the materials used but comply with our regulations.

Perhaps the most challenging aspect of the construction related to the fact that in the first few years, as the logs dry, the height of the walls will decrease by approximately 100mm! This presented detailing issues at structural openings, internal stud walls, wall plate level and external post supports. The challenges ranged from dealing with the effect this amount of movement could have on the primary structure, to achieving and maintaining airtightness throughout the building.

To accommodate structural movement, settlement space was created above the windows and doors and removable 'bucks' of different sizes, will be inserted as the space reduces.

Column or post bases sit on adjustable 'feet' which are checked periodically and adjusted for settlement. The airtightness test yielded a satisfying result of 1.12 in one cabin and 1.6 in the other. This was down to a combination of inventive detailing and meticulous attention and care on site by the contractor, Gerard McCann.

Once Pioneer homes completed the log frame, the project was ready for roof construction and internal fit-out by local contractors. Structurally the log rafter's bear onto the log walls. Where the log rafter's span we detailed an infill void filled with quilt insulation and finished externally with Western Red Cedar plank. Both cabins adopt vaulted spaces emphasising the mono-pitch roof.

Internally, we opted for Birch plywood with the application of a fire rated paint. Given the properties of Western Red Cedar in relation to spread of flame, we negotiated the specification coatings with Building Control. The scale of the logs themselves demanded a proportional eaves detail complementary to the overall design of the cabins. Overlapped Cedar plank was used along the roof edge to create a clean horizontal profile on elevation. A green roof was implemented to compliment the natural surroundings of the site.

The interiors were beautifully fitted out by the client and contractor. The restrained style allows the logs to hold centre-stage, yet there are thoughtful complimentary details like bespoke light fittings and handmade bunk beds. Style, detail and materials are sensitive and consistent throughout – right down to the copper bath and cedar hot tubs!

Aurora has been a unique project for us. We have enjoyed every moment of the design development and construction. Most importantly the whole team – clients, Pioneer and the contractor were a joy to work with. The learning curve was steep, but hopefully it will lead to further challenges as our clients have now become sole agents in Ireland for Pioneer Log Homes. ■

There's no BIM like home Part 7

Words by Dan Rossiter MCIAT

AT Journal continues its exclusive access to serialise Dan's blog on how he used BIM to produce an information model of his home.

After validating my BIM Execution Plan in the last issue, the next step is for me to start producing information about my home. However, before I do so, I want to go over my data security requirements to make sure I haven't missed anything, and that my data is safe to share.

Right, first thing's first; if anyone is doing BIM and concerned about data security then the first document to consider should be PAS 1192-5.

The goal of PAS 1192-5 is admirable, it intends to:

- protect information about the location of sensitive assets;
- protect information about assets that are considered sensitive; and
- recognise where data collection could compromise the security of an asset.

Perfect, I do not want everyone reading to know where I live or know any details about my home that may make it a target, so PAS 1192-5 seems perfect. However, once I had read PAS 1192-5, it quickly stops being relevant as my home does not form part of the national infrastructure and is not a landmark; therefore is not considered a 'sensitive asset', meaning that the PAS 1192-5 does not apply. Instead, it suggests that I meet base security requirements as well as the Governments Cyber Essential Scheme and the Security Policy Framework. However, the Governments Cyber Essential Scheme is not applicable as I have outsourced responsibility for my network to Google through hosting my files on Google Drive, and the Security Policy Framework is very high level and relates specifically to HMG data, of which I am collecting none. So what next?

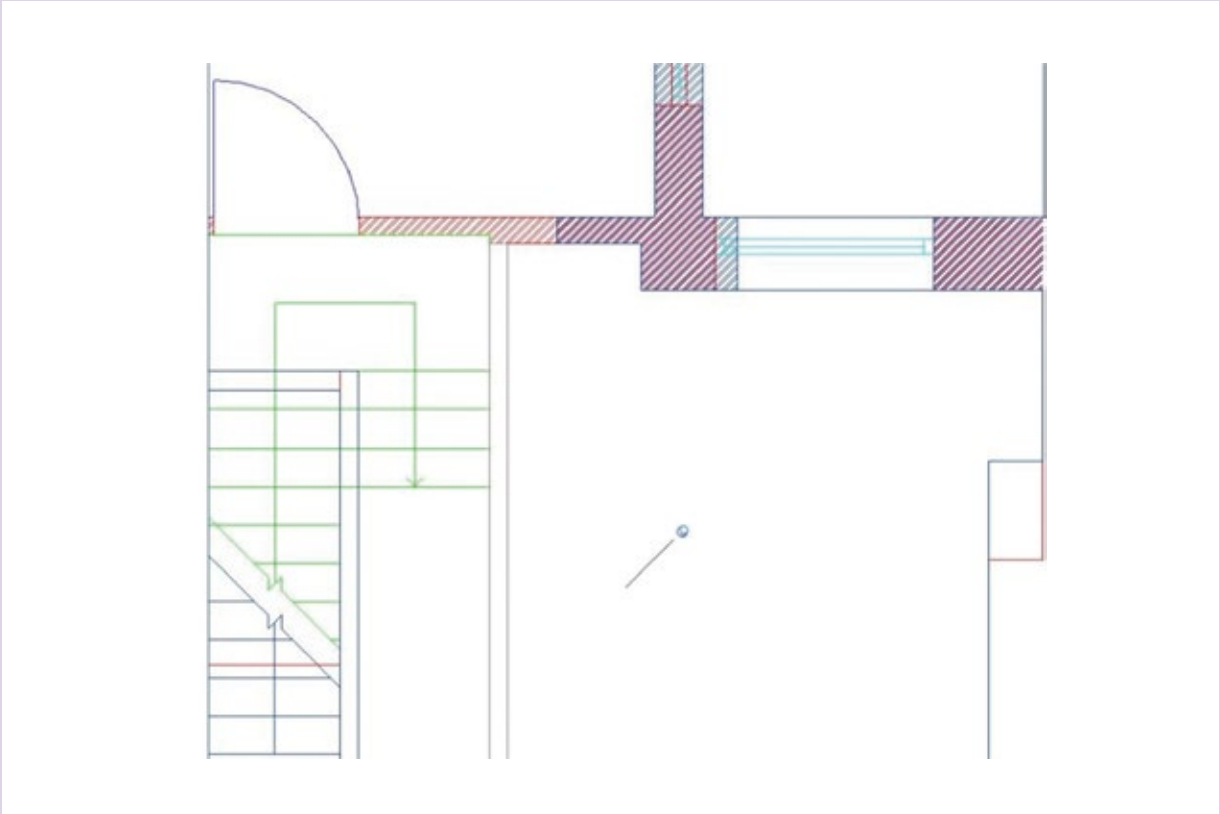
Thinking about it, my concern is not with data security but more do to with handling personal information. While I am happy for you to know lots about me, without my partner's consent, if I were to advertise our address and contents of our home there would certainly be an issue around data protection and personal safety. So, I instead referred to information from the International Commissioner's Office (ICO), who have several useful resources relating to the Data Protection Act. Which calls for me to assess:

- **What information do I intend to share?** The graphical models, non-graphical data and documentation I will be producing about my home.
- **What is the objective of sharing this information?** To demonstrate how BIM Level 2 processes can be successfully applied to a small-scale residential scheme in a pragmatic and straightforward manner.
- **How do I intend to share it?** Place information within a Google Drive folder with public access.
- **What risk does sharing the data pose?** Provide unintended personal or sensitive information about occupant(s) and their home.
- **Could the objective be achieved through anonymising it?** Yes, as the information doesn't need to be complete, just consistent. However, there is a time resource related to the manipulation of any information, therefore, the preferred method is to exclude sensitive deliverables for sharing.
- **Will data be transferred out of Europe?** I don't know.

The Data Protection Act has strict rules around having personal information leave Europe. Google have several data centres across the globe so any personal information could be transferred to any of these. However, Google have established sufficient contract clauses to comply with the Data Protection Act and use their data stores outside of Europe. To avoid this problem, I should avoid the inclusion of any personal or sensitive data within my shared deliverables. Much like traditional risk assessments, the best solution is to follow ERIC (Eliminate, Reduce, Isolate, Control).

Luckily, I have already been eliminating personal information from my documentation though removing addresses, as well as reducing the risk through supplementing real-world coordinates for a 0,0,0 project base point in my BIM Execution Plan. Therefore, by controlling the remaining data within my models through removing any physical location information, I should not be sharing any personal or sensitive information. There you have it, by carefully considering my information requirements through using the relevant standards, I have further enhanced my data security plan; fantastic. This means that I am ready to start producing information to answer my next plain language question, PLQ 2.3, what is the layout of the house?

Originally I had arranged for a friend with a point cloud scanner to come by and measure my house. If this had happened it would have had a sexy point cloud file I



could have shared with you. However, their timing didn't work out. Luckily for me however, I still have a Disto and tape so it was time to roll up my sleeves and do some old fashioned surveying!

So to start lets refer to my TIDP, I need to produce a survey that can be used as a precursor to produce my 3D graphical models. Also, by referring to my BEP I needed to:

- follow the specified BS1192 file naming;
- export in DXF;
- follow the specified BS1192 layer naming;
- use BS8541-2 compliant symbology;
- use the outlined origin point; and
- comply with specified tolerances.

File name and format:
This one is simple as I have a convention outlined that I need to follow compliant with BS1192. However, while surveying I decided that it was easier to keep both floors in separate files so that I can use the correct origin points and not worry about overlaying lines with different offsets. I have now revised my TIDP to reflect two separate survey files and made sure that the uploaded files are DXF as specified within my BIM Execution Plan.

Layer naming:
This one was also pretty simple as I have opted to also follow the BS1192 container naming for my AutoCAD layers. Using NBS' Uniclass 2015 search tool, I identified the appropriate system classifications for the layers I needed to survey my walls, doors, stairs, windows and dimensions.

Symbology:
Referring to my copy of BS8541-2, I made sure that any symbols I used were included within. In this file, I had a number of symbols which included architectural ticks for dimensions and two ceiling height symbols (one for ceiling height and one relative to FFL). In addition, I also needed to use symbols to represent doors, windows, stairs and walls; all of which are included within BS8541-2, even the brick hatch that I used is specified within. Using clear symbology based on an agreed standard when drafting is key, as without a clear message on drawings, disaster can occur.

Origin point and tolerances:
Finally, by following the origin point I had set out in by BIM Execution Plan, I was able to ensure that my files align providing a coordinated set of survey data. In fact, to make sure that my survey's aligned I imported both of them into Revit to compare. Surprisingly, both files closely aligned after taking a few extra check dimensions and then resigning to the fact that buildings are not straight. I tweaked a few final dimensions within tolerance and ended up with two coordinated survey files that line up perfectly when imported based on their origin points.

There you have it, by planning how I need to undertake the work, I was able to efficiently produce coordinated survey data in a usable format, ready to be used to produce my 3D graphical models. However, as I haven't produced floor plan PDF deliverable, so I won't call this plain language question complete just yet.

Now that I have my 2D survey data, it's time to finally do some 3D modelling... ■

To be continued in the next issue
@DRossiter87

Five signs you are at risk of asbestos poisoning at work

Words by: Neil McKinley, Personal Injury Solicitor, JMP Solicitors

With the latest Health and Safety Executive (HSE) statistics highlighting that Britain's death toll from asbestos is at 'crisis level'*, it's now more important than ever to recognise the risks of asbestos poisoning in the workplace.

There were 2,709 'deaths by industrial disease' recorded by coroners in England and Wales in 2018, a 44% rise on the 1,878 recorded in 1995, the earliest available figure*.

Whilst efforts have been made to remove asbestos, the material that was previously used as insulation in many old buildings, the effects of poisoning can take a long time to develop, and can include everything from fibrotic lung disease such as asbestosis through to lung cancer.

Neil McKinley specialises in industrial disease cases including asbestos related conditions, he said: "According to the World Health Organisation (WHO) no amount of asbestos exposure is safe and even the smallest amount can prove detrimental to health.

"Asbestos is defined as a group of minerals made of microscopic fibres which can be dangerous when dealt with inappropriately. Workplace risk assessments need to be completed to avoid employees having contact with toxic asbestos fibres, as inhaling asbestos dust can cause a number of severe lung conditions, which in extreme cases, can further develop into cancer.

"Therefore, those working within an industry where exposure has been or is still possible, extreme precaution is vital. If anyone feels that they require legal assistance then they should contact JMP and a designated solicitor, like myself, who will be able to assess their case."

Here are the five signs that you are at risk of asbestos poisoning at work:

1. Nature of occupation
Certain occupations mean employees are more likely to be exposed to toxic dust, due to the work environment and responsibilities within these job roles. Workers in construction, shipyards and factories are among those facing a higher possibility of being exposed to asbestos. Professions with no permanent place of work, such as electricians, firefighters and auto mechanics, are also likely to find themselves at risk as they work in so many different environments.

2. Age of the building
The peak period for asbestos installation was before 1970, with asbestos being fully banned in 1999. If you have been working in a building built before this time, it may be worth getting a check-up and calling for the environment to be checked for asbestos if it hasn't been already. Those who have worked in the building and construction industries, particularly in the 1970s to late 90s, are at a higher risk of having encountered asbestos. Some job roles require employees to visit various sites that may be putting them at risk and although asbestos is no longer being used in buildings, it can still remain in older buildings so it's best to be vigilant.

3. Working with asbestos-containing materials
Asbestos is dangerous even in the smallest amounts – if material containing the asbestos fibres is chipped, drilled or broken, it can release a fine dust. In case of having to work with such materials, it is essential to have been made aware of this fact to ensure you take care in not touching or breaking the asbestos. In addition, taking showers before returning home is essential to avoid endangering family members.

4. Inadequate protection by employers
Your employer has a duty of care in protecting you against harmful substances and ensuring your safety in the workplace. It is essential that all employees have been provided not only with safety equipment but also thorough instructions, information and training. If none of these have been addressed, it puts you at a higher risk of asbestos-related illness, especially when occupations involve working closely with asbestos.

5. Working near contaminated job sites
Although you may not be working on a live asbestos site, you may be within close proximity of one. It is important that your employer outlines the risk of working near sites that may contain the toxic fibre in order to prevent yourself and those around you from asbestos poisoning. Asbestos remains in the air for hours, putting anyone nearby in danger of inhaling or ingesting it. It is therefore vital to be aware of your surrounding working environment. ■

* https://www.theguardian.com/society/2019/jul/07/britains-death-toll-from-asbestos-at-crisis-level-figures-reveal

Key Planning Portal statistics

VISITS
944,511

UNIQUE USERS
565,536

APPLICATIONS SUBMITTED
Every 15s

TIME ON SITE
2.56 mins

PAGE VIEWS
3,301,151

PAGES PER VISIT
3.44

NEWSLETTER SUBSCRIPTIONS
116,000+

FEMALE
35%

MALE
65%

AGED 25-44
54%

c.90%
Planning applications submitted nationally through Planning Portal (around 2,100 per day)

Building control application service. More than 40,000 applications, submitted over 70% of local authorities signed up.

About the Planning Portal

The Planning Portal is the national planning and building control application service, that facilitates the online submission of over 90 per cent of applications to English authorities. When launched in 2002, the Planning Portal brought a previously paper-based planning application service online, making the process easier, quicker and more accessible for professionals and homeowners alike.

The Planning Portal is a joint venture between TerraQuest and the Ministry for Housing, Communities and Local Government. The Planning Portal work in close partnership with planning professionals and local authorities across England to ensure the content and services are always correct and up-to-date. The site also acts as a hub for current and emerging policy, detailing and linking to all documents relevant to planning and building control.

In addition to providing application services, the Planning Portal has created a number of other facilities which support the industry at large.

One key facility is the Professional Portal, which is a collection of free tools and guidance specifically aimed at planning and building professionals. It includes an application toolkit, quick links to relevant legislation, important planning news, industry updates and much more. Since launching the Professional Portal in 2017, many professionals have indicated that having these tools in one place has significantly improved their working practices.

Along with their parent company, the Planning Portal also offer ReQuestaPlan, a digital map service for creating site and location plans. With ReQuestaPlan, high quality, compliant plans can be produced quickly and at a low cost. Those using ReQuestaPlan in a professional capacity can set up professional accounts at no extra cost, which gives users access to additional plan scales, as well as the ability to pay for maps as you go or via a monthly invoice.

The Planning Portal distributes a free weekly newsletter to over 115,000 opted-in subscribers, that contains the latest and emerging planning and building control news. In addition to this, the Planning Portal sends out two sector-specific bulletins every month, one aimed at local authority planning and building control departments, the other aimed at those within the architectural sector. The bulletins help professionals to keep up to date with the latest industry news as well as stay informed of Planning Portal updates.

The Planning Portal supports the sector by forging close working partnerships with influential professional bodies such as CIAT, RIBA, LABC and RTPI. Through these strategic partnerships, the Planning Portal can learn more about different specialities within the sector and so continue to improve their service. The Planning Portal also hosts key services for partners, such as the RTPI's Directory of Planning Consultants and FMB's Find a Builder service. This helps both parties to expand their reach. And by organising and attending trade events, the Planning Portal is able to facilitate crucial knowledge sharing within the industry.

It isn't just those within the industry who benefit from the Planning Portal. As well as supporting professionals, the Planning Portal also offer guidance to the general public. Much of the Planning Portal's less technical guidance is hosted in the Common Projects section of the site that covers popular projects undertaken by homeowners.

The Planning Portal site also features an Interactive House to explain permitted development rights and building regulations in an easy to use way. This digital tool allows users to view specialised advice against a visual representation of a building.

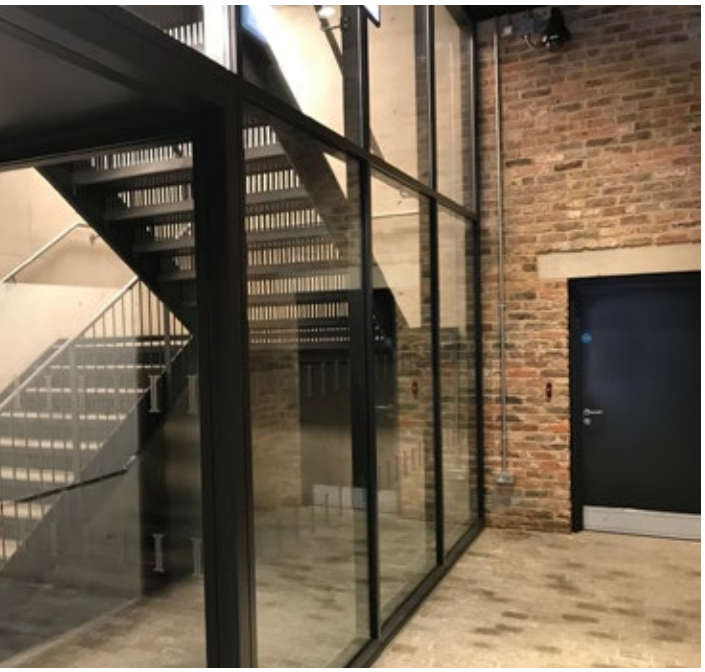
The Planning Portal's guidance is regularly used by industry professionals to help their clients understand the needs of particular projects and is linked to every local authority website in the country.

If you would like any further information on Planning Portal services, please contact them at communications@planningportal.co.uk. ■

Breathing new life into historic buildings

Words by: Andy Lake, Pyroguard

In major cities around the world, historic buildings form a significant part of the landscape. Often providing glimpses into the proud industrial heritage they once helped to fuel, these buildings often struggle to find a purpose in today's fast-paced urban societies.



Times have changed, how people live and work are vastly different and buildings must accommodate this if they are to remain purposeful today. Glazing can play an integral role in the transformation of these often-forgotten architectural gems, bringing visually-stunning designs to life, while ensuring practicality and safety.

London's Coal Drops Yard, located just a stone's throw away from King's Cross – one of the city's busiest travel hubs – is one such building. Once a powerhouse of the industrial era, the Yard's Victorian buildings were used for warehousing for more than a century before playing host to some of the city's vibrant night life venues. Since 2007 they have stood unused.

Now, little more than a decade later – and more than 150 years after their initial construction – Coal Drops Yard has been transformed into one of London's premier shopping destinations.

Connecting old and new

Made up largely of two 19th Century coal warehouses, the site needed to be drastically re-thought to evolve into a new retail complex comprising of more than 50 shops and restaurants. With high levels of footfall anticipated, the safety of individuals would need to be a primary factor in its redesign. Additionally, creating light-filled spaces to attract shoppers from across London would be integral to the project's long-term success. As a result, specifying materials capable of balancing safety requirements alongside aesthetics and practicality was critical.

Supplying in excess of 150m^2 of Pyroguard Protect toughened fire-rated glass to various classifications – including E60, EW120 and EI60 – to the project, Pyroguard was able to fulfil the designer's safety requirements, while delicately balancing the need for aesthetic excellence to contribute to the repurposing of these historic buildings. Working closely with Propak Architectural Glazing who were enlisted to design, manufacture and install a large range of steel glazing systems for the project, Pyroguard created a bespoke thickness of 31mm, instead of the traditional 25mm for the EI60 requirement, to perfectly complement the systems.

With glazing having a critical role in the designer's vision of Coal Drops Yard, it would be responsible for providing the transparent features which flood the site with natural light and bring the industrial buildings into the modern day. Besides its architectural significance, the project's glazing also has inherent safety characteristics, designed to keep occupants safe in the event of a fire.

Custom manufactured, Pyroguard Protect toughened fire-rated glass can be created in expanses large and small, equipping fabricators with the flexibility needed to fulfil expectations in ambitious architectural projects. It also provides protection against flames, smoke and radiated heat, in addition to impact classification to EN12600, facilitating the transmission of natural light, as well as providing acoustic control and thermal and solar performance. Certified for use in steel, aluminium and timber frames, it was selected as the perfect partner for the steel frames designed by Propak for Coal Drops Yard.

To discover more about Pyroguard's range of fire rated glazing solutions visit pyroguard.eu ■

Top tips to consider before working at height

Words by: Matthew Bailey, Divisional Manager, Inspection and Certification, HCL Safety

There were 35 fatal injuries to workers due to falls from height in 2017/18, according to Health and Safety Executive (HSE) statistics. The potential risks associated with working at height are plain to see, but thorough preparation and close attention to detail has and will continue to help reduce this figure. Here are top tips to consider before working at height, and explains why professional inspection and certification can contribute to safer working.

Pay attention to legislation
There are many ways to mitigate these risks but first and foremost, they must be implemented from a deep understanding of all relevant legislation. Doing so will not only help to mitigate potential risks but help ensure that those responsible for the safety of those that work in height are acting in accordance with HSE guidance. The HSE states, for example, that those in control of any work at height activity must make sure that work is properly planned, supervised and carried out by competent people.

Always carry out a comprehensive pre-use inspection
Those that work at height who have received quality training will be competent and well-equipped to carry out a thorough pre-use inspection of all equipment before any work at height takes place. They will also be able to check whether all relevant certification is in place. This is essential. Annual inspections and formal checks should also be carried out by third party suppliers (such as HCL safety) on a regular basis. Typically, this is annually, but it depends on the application and frequency of use (amongst other factors).

Mitigate the risks
Follow the hierarchy of control for working at height which means, if at all possible, eliminate the risk entirely. If it's unavoidable, then select collective measures to help prevent falls (such as guardrails and working platforms). If this isn't possible, then minimise the distance and consequences of a fall by working in fall restraint. Working in fall arrest should be a last resort.

Select the right equipment for the right job...
For work to be carried out safely and efficiently, the absolute right equipment for the job must be in place, whether that be permanent or temporary guardrails, fall restraint or fall arrest equipment. All equipment must also be compatible with each other, such as PPE and engineered systems. It is vital to recognise that a 'one-size-fits-all' approach will often not improve employee wellbeing or safety. If items cannot be used in unison and/or do not fit properly, then this could lead to inadequate protection.

... And make sure it's high quality
All equipment used should be designed and manufactured in compliance with essential health and safety requirements. Achieve peace of mind that this is the case by partnering with a quality, reputable manufacturer and choose equipment based on the job at hand: Can it be done from ground level? What space is available? What are the risks? Asking pertinent questions will help when selecting equipment and ultimately, help mitigate risks.

Have a rescue plan in place
Importantly, when working within fall arrest, together with all relevant PPE, a rescue plan, in accordance with section seven of the Working at Height Regulations 2005, must be in place. It is not just the responsibility of the emergency services. Furthermore, any delay in the emergency services arriving on site could be critical for the worker. Assistance in the development and implementation of a comprehensive rescue plan is a typical by-product of top-quality training.

Do nothing without training
Employers have a responsibility under the Health and Safety at Work Act 1974 to provide suitable information, instruction and training for their employees. Training gives those that work at height the confidence, knowledge and skills required to carry out their work safely and efficiently. High quality training should cover both work at height theory and practical exercises, including proper inspection of PPE and the execution of relevant risk assessments and method statements.

Got your PPE?
PPE plays a vital role in mitigating the potential risks associated with working at height. The PPE chosen should be appropriate for the job at hand, safe and comfortable. A more comfortable worker typically makes for a more productive worker. All PPE should be suitable for the work activity being undertaken and also the prevailing environmental conditions. Compatibility with other fall protection equipment is also vitally important. ■

Taking design and safety to new heights

Words by: James Gooder, SFS

While everyone understands the dangers of working at height, not everybody is familiar with the challenges or solutions on offer. Understanding how protection works, and what's best for each situation can improve the safety of workers, the aesthetics of the building and the efficiency of the build.

Most designers and construction contractors commit people to working at height – either during the building phase, or in maintenance and repair. An essential part of any building project, it is also fraught with risk – from exposed edges and damaged tiles, through to open lift-shafts and fragile skylights to potentially fall through. Then there is worker fatigue and the weather, with high winds, rain and ice presenting particular challenges.

Add in slippery algae and moss, plus the sheer range of roof coverings, types and designs and it's clear that there is an issue. Roofing specifiers and contractors are sending out people to work at height with countless variables, where any slip, trip or fall could have disastrous consequences.

Clearly, with human life at stake, there is a large amount of legislation in place to protect workers. There is the Working at Height Regulations 2005 and the 2015 CDM (Construction Design and Management) regulations.

There are also RAMS – Risk Assessment Method Statements. RAMS are designed to ensure that health and safety risks are fully considered and identified in order to 'reduce the risk of those who build, maintain or use structures'. Generally, best practice advice says avoid working at height if all possible. If not, measures must be installed to minimise risk.

Already quite stringent – in the UK at least – regulations will only become tighter. Right now, a new standard, BS EN 17235, is being drafted to coordinate the efforts of companies that manufacture systems for roofing and safety systems, so there's a concerted industry-wide effort to improve safety standards. Anyone involved with working at height therefore has a responsibility – moral and legal – to stop people from coming to harm.

Despite this, specifying the optimum fall protection systems isn't always front of mind. Many designers, for example, are primarily focussed on aesthetics and using new materials to push the boundaries of design. While they are aware of the need for protective systems, the detail often isn't specified out and is left to the contractor's discretion.

However, faced with multiple pressures – including an increasing skills shortage and the complexity of project management – these contractors are often unable to keep abreast of the many specialist solutions on offer. As a result, there's a potential for provision to fall short of optimal.

Fall protection – Knowing your type

Essentially, fall protection systems divide into temporary or permanent.

Installed for repairs and removed when the work is completed, temporary protection includes scaffolding, cranes and mobile platforms. Often costly and unsightly – as the scaffolding currently covering Big Ben demonstrates – they can also potentially damage the roof or structure. Temporary solutions are often the only option for older buildings.

On the other hand, new builds tend to incorporate a permanent system which can be used to support future works. These fall into two categories: collective restraint, and personal lifeline.

Collective restraints include handrails, walls and even glass parapets around the perimeter of the building. Best practice suggests using restraints that are at least 1.2m high to 'fence off' the high-risk areas. They have merits, but they often break the aesthetic lines of the building. Nor do they offer protection for hard to reach areas.

With personal lifeline systems, workers wear a harness connected by wire rope to a fixed anchor point, allowing them to move safely around the roof. Systems offer either work restraint or fall arrest.

Work restraint systems guide workers within pre-defined limits to prevent them from getting into high risk areas where a fall is possible. However, whenever a fall becomes even a remote possibility, fall arrest systems (FAS) become mandatory.

Arresting the fall

FAS allows workers more freedom to work on gutters, windows and walls. Should they slip, the systems' mechanics kick-in to break their fall.

There are many personal lifeline systems available. At SFS, for example, the Soter™ II offers an integrated fall and restraint solution, with a discreet low-profile suitable for a wide range of applications. Soter™ II uses a patented energy absorbing coil to break falls and dissipate the energy, helping minimise damage to both worker and roof.

It also features a CE-marked Slyder device which allows up to four workers to move freely without the risk of entanglement.

There's more to specifying a fall arrest system than just the technology. For example, within the RAMS, there should be a clear instruction of how to rescue a worker who has fallen. This should be done within a time limit of three minutes, otherwise the PPE harness can start to cut off blood circulation.

Make the right choice

With so much to evaluate, it is understandably difficult to pick the right system. However, there's really only one factor that matters: ensuring maximum protection for workers.

This is the single most important consideration and should be the one at the centre of decision-making. After that, it is a question of evaluating the factors – roof type, access requirements, even wind load calculations – and customising a solution to each requirement.

On retrofit projects, which were built without the benefit of foresight or legislation, the building itself will largely dictate the approach. Fall protection systems should also look at the potential obstacles on the roof. Skylights are particularly hazardous, due to the fragility of the glass.

On new builds, there's more scope to shape the decision. The key here, perhaps, is to ensure full and proper freedom of movement for workers in a way that supports the future maintenance needs of the building, as well as the integrity of the design.

In addition to these physical factors, specifiers and contractors should look for added value features, including the expertise behind the protection systems.

For example, it is always good practice to use manufacturers who can provide advice and support at every stage, from design through to implementation. This helps streamline processes and can even deliver cost-savings over the lifecycle of the project. Also important is their investment in research, development and testing. Roofing is ever evolving and fall protection systems must also continuously evolve to accommodate these advances.

Manufacturers have an unwritten responsibility to vet the installers that use their systems. This includes auditing and training them properly. This not only ensures the system is installed safely and correctly, but also efficiently. A sign of a quality manufacturer is their ability to reach out not just to installers but to every influencer in the construction process. This can even start with CPDs or similar approved courses aimed at contractors and designers.

These are all features of SFS's offer, but it's not a given across the industry. These aspects of the service are every bit as important as the quality of the product. Like the components within the systems themselves, everything works together to ensure the right outcome.

In summary then, safety at height isn't just a question of handing a lifeline to the workers on the roof. It's also about the line of support that extends from the supplier. In other words, the complete support package.

For more about SFS, please visit sfsintec.co.uk ■

Futurebuild 2020: Be the catalyst for change

futurebuild
03-05 March 2020 / ExCeL, London

A clear message to come from the recent climate change demonstrations and declarations of action from government and leading organisations is that we need to work together. Put simply, without collaboration we will fail.

Futurebuild 2020, which takes place from 3–5 March 2020 at ExCeL London, will inspire Architectural Technology professionals to come together to deliver a more sustainable built environment, providing a platform for debate and discussion alongside the most innovative brands. The event will empower visitors to be the catalyst for change that is needed across industry.

Setting the agenda

Futurebuild is recognised for its agenda setting conference and this programme is evolving for 2020. Sessions will follow a three-day progression; the central theme will be on how to respond to the climate and ecological crisis facing us and commit to making a change. The Conference Stage Arena will be home to engaging sessions led by politicians, academics and industry shapers.

The conference will include a session which has been developed in partnership with CIAT. 'Professional Collaboration: Do it together' takes place on day three (5 March) at 14:15-15:30. The debate will bring together presidents of several institutes to discuss how those working in the built and natural environment are currently tackling the climate and ecological emergency, and ongoing plans for the future with responses from an independent panel and the Futurebuild audience.

Other sessions which will be of particular interest to Architectural Technology professionals include 'The future is regenerative' chaired by Peter Murray, Chair of New London Architecture. The session which takes place on day one (3 March) will explore how design and construction needs a circular rethink and how we can make our cities fit for purpose, our buildings net zero and champion green retrofit.

Additionally, on the second day of the conference (4 March) from 14:15-15:30, London Mayoral candidate Rory Stewart will sit on a panel on the 'Carbon neutral cities of the future' session. From improving mobility to urban greening, and combatting air pollution, the panel will explore the pathway to healthier, more equitable and resilient cities.

Policy and legislation in the built environment will also be a key area of discussion on the main stage. 'How to mandate change: legislation, regulations and guidance' taking place on the second day of the conference at 12:30-13:45 is a session not be missed for Architectural Technology professionals. The discussion, chaired by Julie Hirogoyen, Chief Executive of the UK Green Building Council, will explore current policy context and changes required to achieve net zero, considering a range of perspectives from across the industry.

While discussions on the conference stage will focus on the biggest issues facing the built environment at a macro level, the six Keynote Stages will look at the specific challenges impacting building, offsite, energy, interiors, resourceful materials and critical infrastructure. This programme of solution-driven sessions will share the latest thinking and research, to educate, inform and inspire visitors to make a positive change.

The six Keynote Stages will address the following challenges:

- **Buildings:** retrofitted, re-used, net positive and built to perform
- **Offsite:** reliability and efficiency combined with creative placemaking
- **Interiors:** sustainable and health promoting
- **Resourceful Materials:** thinking circular to reduce, reuse and recycle
- **Energy:** accurate data for carbon accounting and reduced clean energy usage
- **Critical Infrastructure:** delivering integrated green, grey, blue and social infrastructure

Each day, the stages will host a focussed keynote presentation by a recognised expert in their field. This and other sessions will look at tangible solutions and approaches which will make a real difference to practice and performance.

Beyond the stages

Around each Keynote Stage there will be an exhibition of innovative brands, offering unique solutions to the challenges discussed in the companion knowledge programme. It will feature some of the largest headline brands in the sector, alongside SMEs and start-up organisations, creating a dedicated platform to connect these companies with forward-thinking specifiers and buyers.

Across the exhibition, brands and organisations that are leading the change when it comes to innovation will be recognised through the Innovation Trail. A guided route will take visitors on a journey through the event and immerse them in the latest thinking from Futurebuild's Innovation Partners, which include ACO Technologies, Smart Systems, CEMEX Steico and Hadley Group.

The Buildings area at Futurebuild 2020 will be of real interest to Architectural Technology professionals, covering everything from retrofit to re-use, to making buildings net positive and built to perform. Visitors will be able to explore and discuss the latest building technology, innovations and legislation.

Following on from last year's success, this area has been expanded to include two new showcase areas; the Whole House Retrofit Zone and the Digital Impact Zone. These spaces will enable visitors to deep-dive into refurb and retrofit solutions and experience the latest developments in digital construction.

The game changers are back

Championing innovation is the central purpose of Futurebuild and the 2020 event will see the return of the Big Innovation Pitch. Hosted across the event, in conjunction with BRE as technical partner, the competition will be the industry's largest call-out for innovation to date and will identify and celebrate novel new approaches to some of the biggest challenges facing us all.

On the first day of the event, SMEs will present their ground-breaking ideas on the six Keynote Stages. On day two, the winners on each stage will go head-to-head in the Arena with a panel of renowned judges determining the overall winner. The winner's idea will be incorporated into BRE Academy Training, with the solution also being showcased in the landmark BRE Innovation Park.

Previous years have seen innovative solutions, such as a sustainable alternative to plywood produced from mixed waste plastics and energy and cost saving air-conditioning units, take top spot.

Eddie Weir PCIAT commented "We need to take advantage of innovative technology around us in order to promote sustainable design and construction methods. It's imperative that we improve the quality of our buildings to reduce construction costs and make buildings more eco-efficient overtime. Architectural Technology has the implementation of innovative construction ideas, products and methods woven into its very fabric. CIAT members embrace the challenges associated with these and our ability to design buildings. Futurebuild 2020 is a great opportunity for us to share these ideas and processes to tackle the biggest challenges facing the built environment."

Martin Hurn, Event Director at Futurebuild added: "The responsibility for tackling the climate emergency lies in all of our hands and we must collaborate in order to find solutions to secure our future. Futurebuild 2020 provides the perfect platform for forward-thinking decision makers across the built environment to come together and play a key part in driving positive change.

"We understand that taking time out of work to attend events can be a challenge, which is why we will make sure that visitors can really get involved across a number of levels, from the world class knowledge programme in the arena and on the Keynote Stages, to the showcase of the latest innovations across the exhibition. Innovation to us is more than just futuristic ideas, it's about sharing the latest thinking and ideas, processes and solutions, products and materials. All of these things coming together under one roof at Futurebuild 2020 will inspire people to do things differently and create real change."

Through product showcases, inspirational talks and collaborative seminars, Futurebuild 2020 will make innovation a tangible asset for visitors to assess, develop and implement to drive the industry towards one that is fit for purpose and for the future.

For more information about Futurebuild 2020, the home of innovation, visit futurebuild.co.uk ■

Best Woman Architectural Technologist of the Year 2019

Words by James Evans, Communications & Digital Administrator

Karyn Williams MCIAT is a Senior Associate at Stride Treglown in Cardiff. On 21 May she took the train to London to attend the WICE (Women in Construction & Engineering) Awards, supported by CIAT, in Park Lane. She left having been named Best Female Chartered Architectural Technologist 2019. I'm keen to learn what drives her and where she sees her career going in the future...

She was able to complete her application whilst raising a young family and working on complicated projects in a full time capacity.

I meet Karyn in London and ask how she felt when her win was announced. “It was a shock actually” she tells me, because, she is quick to point out, that fellow nominee Barbara Dixon MCIAT is also doing “great work”. “It’s slowly sinking in” she says. Press are still covering her achievement.

Karyn started her career in construction around 20 years ago and has worked on a wide range of projects. She points to Cardiff Library as one she is very proud of. It was a landmark building, initially designed by BDP, Stride Treglown were appointed as “executive architects offering a safe pair of hands to deliver a fantastic design”. It stands out to her for several reasons. At that point her career she was “emerging from being part of a team to running a team” and its creation “started the cultural development of Cardiff City Centre”. She admits she still gets a buzz when walking past it a decade later. If you’ve ever seen this glass colossus of literature, you can understand why.

She is also proud of her involvement in delivering the fit out of Treglown Court, their flagship office. The client was her own practice and her board of directors and staff were watching closely. It was “quite a responsibility” she tells me, but ultimately, she believes she learned a lot whilst working on the high performing sustainable building. Treglown Court was awarded the highest scoring BREEAM rated office at design stage and the first in the UK to be given the outstanding rating.

Much has changed during Karyn’s time in the industry. “I’ve seen a massive change in technology and in the role [of a Chartered Architectural Technologist]” she says. “We’ve lifted our game… and we are an essential part of the team”. The value that Karyn believes Chartered Architectural Technologists can bring to practices and projects inspires her to promote the profession. She tells me that she’s keen to make children see the role as “something to aim for” and hopes that by entering the career they will eventually “backfill the skills gap we’ve currently got developing”.

Karyn has been Chartered for over five years. She describes CIAT support and Chartership as “so useful”. She says that becoming Chartered was “one of the highpoints of my career” and that it “opened up a huge range of opportunities for me”. Karyn is keen to point out that the Professional Assessment route that she took worked for her because it fitted in well with her busy life – she was able to complete her application whilst raising a young family and working on complicated projects in a full time capacity.

The WICE Awards winner is quick to praise those who have supported her and mentions a number of role models. She points firstly to Anthony Walsh MCIAT, a fellow Chartered Member and now Divisional Director at Stride Treglown as someone who has always guided her over the course of her career. He “always has time for people” and has a “wealth of expertise and knowledge to share”. Karyn also mentions Paul Summers fondly, who worked as an architect at her office and whom she says “had such a great vision of what buildings should be and you would get carried along with his enthusiasm for design. They have both motivated me to be passionate about delivering the best quality buildings possible.”

Karyn regards her colleagues as friends and clearly enjoys working with them “I work with so many lovely people who are really good at their jobs” she tells me. “It really makes coming to work incredibly rewarding.”

Unsurprisingly, Karyn is fast becoming a role model herself. She says that the best moment she’s had since she won the award was when a student congratulated her and said that she’d been “inspired” to get involved in more outreach work and join the Women In Property networking group and have a more active role in the Wales Region.

In a built environment sector dominated by men, being a woman has bought its own challenges. Karyn says that earlier on in her career it was not always possible to talk openly about balancing family and work life. “I think that has and will continue to change” she says. As fathers are also now able to take a more active role in childcare, everyone has become much more understanding of the need to offer flexible working to accommodate the responsibilities people have outside of the office. She believes that it is clear that “flexible working is what people want.”

Karyn is keen to use her WICE Award as a springboard to encourage others, particularly women to join this rewarding industry. “If I can encourage more people into this industry… I can bring about a measurable success for the future of Architectural Technology” she tells me.

As others will seek to emulate Karyn’s success, I want to know what her advice is for aspiring Architectural Technologists. They’ve got to be interested in change, she tells me, as the technologies used on projects are dynamic and evolve so frequently. Ultimately, they’ve got to be committed, and build a career based on the things that drive them “and the rest will follow.” ■

Making the case for sprinklers and dispelling myths

Words by: Iain Cox, Chairman, Business Sprinkler Alliance (BSA)

In a recent study[1] carried out by the Business Sprinkler Alliance on attitudes to sprinklers, 33% of those surveyed felt that other fire safety measures guarantee better protection from fire. The reluctance to install automatic fire safety sprinkler systems in commercial and industrial buildings is based on misconceptions about safety and efficiency, combined with a lack of helpful, accurate information or clear guidance. The Business Sprinkler Alliance dispels and debunks the myths and looks at why we may be missing opportunities that are delivered by the wide ranging benefits of automatic sprinklers in dealing with fire.

1 UK: Commercial and Industrial Attitudes Study 2018 – Business Sprinkler Alliance

When a wrongly-disposed of lithium battery caught fire at a London recycling centre, an automatic sprinkler activated and suppressed the blaze, preventing any major damage prior to the arrival of the fire and rescue service. Despite the fire damaging 500kg of recyclable materials, there were no reported injuries and the fire was contained due to the sprinkler systems activating. With the fire safely extinguished, the Veolia recycling centre was back up-and-running the following morning, less than seven hours later. The London Fire Brigade emphasised the effectiveness of automatic sprinkler systems during the initial stages of a fire, stopping it from spreading and causing more damage.

One of at least 200 sprinkler-saves in large industrial buildings in the last three years, the Veolia fire demonstrates the effectiveness of sprinkler systems. In nearly all cases businesses are up and running again within hours, with little loss of productivity and no loss of jobs.

Despite the fact that well over 40 million sprinkler heads are fitted annually across the globe, there remains a lack of understanding about their effectiveness or that they work in a remarkably broad set of situations. According to recent statistics, sprinkler systems have a performance effectiveness of 99% across all building types whilst 95% of fires are controlled or even extinguished by the operation of fewer than five sprinklers, debunking the myth that if one sprinkler goes off then all of them will.[2]

Sprinklers are one of those things that are taken for granted or dismissed. People either understand them and see the true benefits of them, or don't understand them and too quickly dismiss them without really being able to justify why. From improving life safety to business protection, continuity and sustainability, the introduction of automatic sprinklers offers many positive benefits. Their inclusion can also permit freedom of design which in turn can create savings in the initial capital outlay for construction and in the lifecycle costs of the building.

Despite the fact that well over 40 million sprinkler heads are fitted annually across the globe, there remains a lack of understanding about their effectiveness or that they work in a remarkably broad set of situations.

Design flexibility

We are all looking for greater flexibility in the workspaces we are designing today. Whether it be extra useable space, greater sight lines or simply more glazing for natural light. Each in turn offers challenges to the buildings we design from a fire safety perspective.

Automatic sprinklers offer an interesting opportunity to meet these challenges whilst minimising the impact of fire on an enterprise. Firstly, an automatic sprinkler system enables the balancing of fire protection measures, which in turn creates a number of significant design opportunities. The automatic sprinklers will operate in a fire to minimise the size and spread of the incident. Therefore an office which has automatic sprinklers allows occupants more time to escape when fire occurs, which for the designer means they can consider longer travel distances and adjust escape doors and stairs, freeing-up their space. This provides flexibility in the location of staircases and can avoid the need for escape corridors.

Another design benefit with sprinklers is in the number of firefighting shafts and fire mains which can be reduced if sprinklers are fitted. In a building without sprinklers, a firefighting shaft should be provided such that no part of a floor is more than 45 metres from a fire main outlet in a protected stairway. If a building is fitted with sprinklers, the distance can be increased to 60 metres.

Sprinklers act to limit fire growth so that designers can consider larger compartment sizes, which in turn offers additional design options. In addition to greater freedom in the building layout, sprinklers can work to contain a fire and limit it to the compartment of origin. Indeed we should view sprinklers as a form of compartmentation, using water spray in place of walls.

Building Regulations Approved Document B (ADB) offers guidance that buildings are separated sufficiently, or that a portion of the building's external wall should be suitably fire-resistant to prevent fire spreading between buildings. The area of external wall required to be fire-resistant is related to the distance between the external wall and the site boundary. However, because automatic sprinklers inhibit fire size and therefore spread of fire, the non-fire-resistant area of external wall can be doubled, giving designers greater flexibility in external wall design and layout.

A building's façade, particularly for an office, is a sensitive part of a building design both in terms of capital cost and aesthetics. It is one of the more common areas where automatic sprinklers can be used to gain advantage even though standard guidance does not necessarily recommend them.

2 Efficiency and Effectiveness of Sprinkler Systems in the United Kingdom: An Analysis from Fire Service Data – Optimal Electronics May 2017

Maximising a building footprint

The link between façade specification and automatic sprinklers arises as there is a need to ensure the risk of external fire spread between buildings is controlled. This is done either by or through a combination of increasing the fire resistance of the external wall of buildings or providing adequate separation. However, cities are becoming denser and space is progressively becoming limited and expensive. To maximise a building's footprint designers, by fitting sprinklers, can use a glazed façade whilst building close to the site boundary. This removes or greatly reduces the need for expensive fire resisting glazing which would otherwise be guided by ADB or BS 9999 in order to prevent fire spread between buildings.

Thus sprinklers could enable sufficient savings on the cost of the façade to fully offset the cost of the automatic sprinkler system, through the difference between the cost of fire-rated and non-fire rated glazing. The requirements vary for different distances between buildings and site boundaries but the presence of a sprinkler system reduces the amount of fire-rated glazing that needs to be purchased.

Moving away from façades, there is a misconception that sprinkler heads cannot be concealed and are visually unappealing. The use of concealed heads, however, ensures that they can be discreet when desired, offering uninterrupted, seamless interiors whilst maintaining vital protection from fire.

Whole life costs will on average be 3.5 times lower in warehouses which have sprinkler systems installed.

Dispelling the 'cost' myth

A BRE Global study published in 2012 considered all the factors relating to the potential for fire including insurance costs, the upfront sprinkler installation cost and maintenance cost over a 45-year lifetime of a warehouse building larger than 2000m^2. The study concluded that the whole life costs will on average be 3.5 times lower in warehouses which have sprinkler systems installed.

These figures are driven by lower incidents of fire, and therefore less fire damage, and lower insurance premiums over the life of the building. Insurers are so confident of the value of sprinklers that they normally allow fire premium-rate discounts for protected properties.

The consideration of automatic sprinklers at the earliest stages of the design will enable all stakeholders to realise and benefit from a wealth of design freedoms. The consideration of automatic sprinklers should be part of a robust design development for any new commercial building project.

Often overlooked automatic fire sprinkler systems are a cornerstone of physical resilience and business continuity. When a fire starts in a building fitted with a fully functioning sprinkler system it has a high probability of being contained from the outset, controlling the fire in advance of fire and rescue services' arrival. In the vast majority of cases the impacted business is fully functioning within hours. They save lives, reduce the threat to firefighters, reduce the burden on the fire service, save businesses, save jobs and protect the environment.

For more information about the BSA visit business-sprinkler-alliance.org

BSA is a new provider on the AT CPD Register, to find out more information about their Property Protection and Business Resilience: Automatic Sprinklers, Background and Benefits course please visit: ciat.org.uk/education/cpd/cpd-register/property-protection-and-business-resilience.html ■

Seeley Library

Words by Toni Page MCIAT CIAT-Accredited Conservationist

rhp have been involved with the remarkable Faculty of History building for over a decade. Our most recent project has the been the refurbishment of the Seeley Library during the summers of 2018 and 2019.

Programme and construction value:

Phase 1
Summer 2018
6 weeks
£50K

Phase 2
Summer 2019
15 weeks
£460K

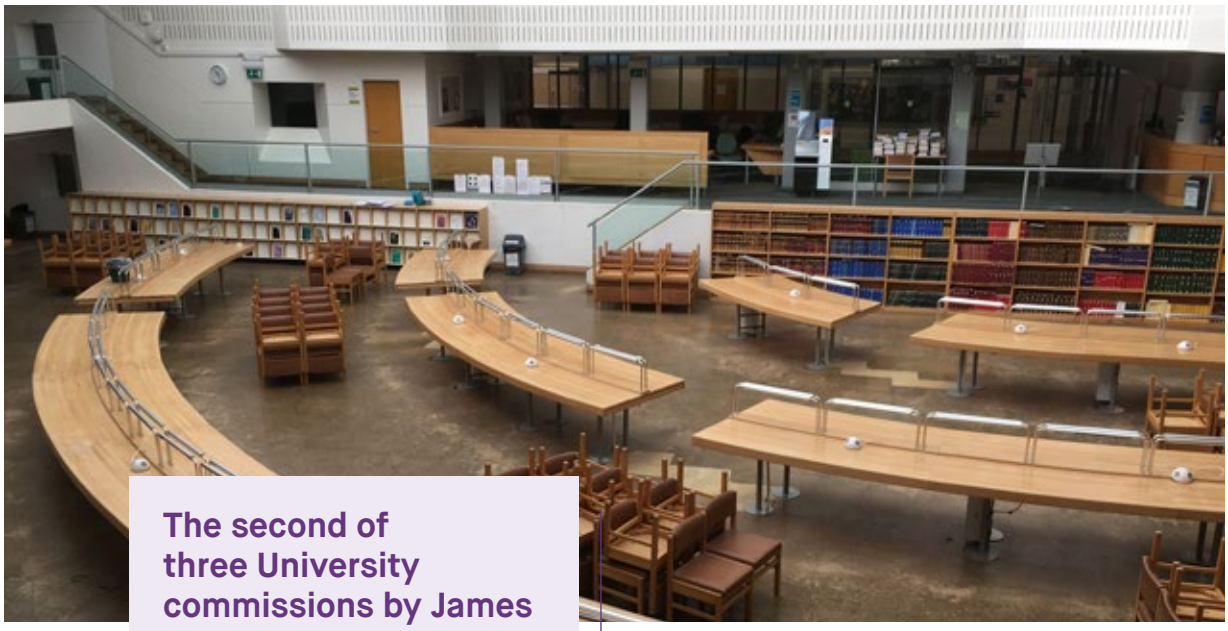
The Seeley Library is Grade II* listed and lies within the West Cambridge conservation area. The Library was commissioned through an invited architectural competition during March 1963 and for which the design by James Stirling (and his then partner James Gowan) was considered to respond perfectly to the brief. Construction of the Seeley Library commenced in October 1964 and the building was occupied towards the end of 1968. It was listed in April 2000 and is the second of three university commissions by James Stirling distinguished by their 'functional expressionism' and use of red brick and glass. The Leicester University Engineering Building (1961-3, Grade II), was the first and the Florey Building, Queen's College, Oxford (1966-71, Grade II) the third. "They are amongst the most important and recognisable British buildings of the 1960s and have been the inspiration for designers and their buildings world-wide." Statement of Heritage Significance – The History Faculty, University of Cambridge, Beacon Planning, June 2017.

The Seeley Library stands in the grounds of a former large 19th Century domestic property, 'Traverston', fronting onto West Road, which was one of three properties purchased by the University in 1961. The original site spanned the gardens of two properties and when one of the tenants refused to give up part of their garden, the competition design was rotated anti-clockwise to fit within the boundary of the one property. As a consequence, the glazed roof of the Library faces south, into the site, and the elevation with the twin towers, originally intended to face east towards the main circulation route, faces north.

Stirling and Gowan was dissolved in December 1963 and the library commission was transferred to James Stirling's new practice. The project was constrained by a budget and timescale imposed by the University Grants Committee. The competition drawings were submitted in a planning application on 26 June 1963 and approval was granted on 23 July 1963. The project was tendered in July 1964 and construction commenced in October 1964.

An Historic Structures Report was commissioned from John McAslan & Partners in 2000, following the building's inclusion on the List of Buildings of Historic Interest. This report stands alongside a masterplan for conservation and adaptation which has informed subsequent projects of repair and maintenance. The building was originally Grade II listed in 2000 but its status was raised to Grade II* in March 2018. This change did not vary rhp's approach as we had already considered the significant heritage of the building when planning the project.

The refurbishment works were designed to improve the aesthetic and functional aspects of the library whilst respecting its status and world-wide reputation.



The second of three University commissions by James Stirling distinguished by their 'functional expressionism' and use of red brick and glass.

The works consisted of the following:

- Providing 24-hour access to the library, basement, WCs and JCR social spaces with the introduction of new security doors to the ground and first floor
- Improving disabled access with the installation of a new platform lift
- New safety glazing to first floor mezzanine balcony balustrades
- Additional and replacement book shelves
- Refurbishing of the original beech reading desks, and adding new desk lighting, USB and power outlets
- Cleaning and general redecoration including refurbishment of the original cork library floor
- Improving environmental conditions to Reference Room 6 by the introduction of new secondary glazing system

As the library is a popular and well used facility, it was crucial the works did not disturb the students. To achieve this, they were carried out in a phased manner which allowed for extensive research into samples and their suitability to be carried out. The students were also involved in the selection of materials, for example, desk lights were trialled using both warm and cool lamps which meant these could be tested throughout the year with the changing lighting conditions and enabled the library to make an informed choice. The cork floor refurbishment has been particularly successful in unifying the space and bringing it back into the original design aesthetic and, during darker hours, the impact of the improved desk lighting can be really seen.

Dr Linda Washington, Head of Humanities and Social Sciences Libraries & Seeley Librarian has said "the Library looks terrific and the refurbished desks, floor, new shelving and lights, are a massive improvement. Library staff all really appreciate the time and attention to detail that has gone into this project and I have particularly been impressed by the prompt and thorough communications keeping everyone up to date."

Over the years, rhp has developed an excellent relationship with the Cambridge City Conservation Officer and the University's Planning Officer which helped the Listed Building application run smoothly, and ensure the project was delivered on time and budget during a very constrained programme. ■

CIAT Approves Pearson BTEC Higher National qualifications in Construction

CIAT has recently granted Institute Approval for Pearson Higher National qualifications in Construction and Construction and the Built Environment, providing additional progression pathways for BTEC Higher National (HN) students internationally.

Within the Pearson HN suite, CIAT have approved two Construction subjects: Construction (RQF) and Construction and the Built Environment (RQF). CIAT Approval indicates that the programme has been assessed in terms of content, structure and resources and has met the Institute's requirements.

This offer will provide HN students with a new progression opportunity after completing their diploma or certificate. If graduates aspire to become a professionally qualified Architectural Technician, studying an Approved programme will allow certain exemptions to advance onto the Professional and Occupational Performance (POP) Record with CIAT, acting as a stepping-stone to becoming a Chartered Architectural Technologist.

As the UK's largest awarding body, and with a mission of helping people progress in their lives through learning, Pearson offers a wide range of qualifications at different levels. With more than 40 subject areas, and co-designed with industry, higher and further education experts and students, Pearson BTEC Higher Nationals provide real-world experience as well as academic knowledge.

Geoffrey Makstutis, Subject Lead in Construction, Art & Design and Creative Media Production within the Pearson Higher Education Qualifications team, commented: "achieving Institute Approval for the Higher Nationals in Construction further enhances the value of these qualifications in supporting students to progress in their careers. CIAT Approval also provides additional recognition within the industry and among professional bodies of the value of vocational education and the Higher Nationals".

Paul Laycock MCIAT, Vice-President Education added: "CIAT is pleased to welcome those studying on the BTEC Higher Nationals in Construction and Construction and the Built Environment programmes to its network. Completing either one of these qualifications will enable individuals to develop their academic, analytic and communication skills in preparation for further study or employment."

This new relationship was celebrated on Friday 13 September, when Geoffrey was presented with the Approval certificate for Pearson at the AT Awards. ■

Geoffrey Makstutis receives his Approval certificate (second left) with Paul Laycock MCIAT, Vice-President Education, Alex Naralan and Matt Allwright

Accredited programmes in the Republic of Ireland

Words by Dr Noora Kokkarinen, Assistant Education Director

The number of CIAT Accredited Architectural Technology Programmes in the Republic of Ireland has doubled.

Galway-Mayo Institute of Technology (GMIT) and Technological University Dublin (TUD) received their Accreditation certificates at the AT Awards event on 13 September 2019.

They join Waterford Institute of Technology (the first CIAT Accredited Programme in Ireland) and Institute of Technology, Carlow in preparing the next generation of Architectural Technology professionals.

Both educational establishments have been delivering their programmes for a number of years (GMIT since 2013 and TUD since 1966 – TUD formerly as Dublin Institute of Technology) and as such, have established strong links with industry.

Paul Laycock MCIAT, Vice-President Education said "we are pleased to welcome GMIT and TUD's Programmes to the Institute's educational network. These additions provide more learners in Ireland the opportunity to study Architectural Technology and be a part of CIAT's vibrant Republic of Ireland Centre."

We found out more about GMIT and what made them become a part of CIAT's community.

GMIT has been offering its four-year Architectural Technology Honours programme since 2013 and its ordinary three-year degree since 2006.

Irene Hayden MCIAT and lecturer says "GMIT is delighted to receive CIAT Accreditation and looks forward to the increased interest and enrolment from prospective students. We would like to thank CIAT for their support and assistance in our endeavours."

"We would encourage other institutions to seek Accreditation from CIAT who have been supportive and collegiate throughout the application process".

Mary Rogers, Head of Department of Building and Civil Engineering, GMIT, said: "Accreditation by CIAT validates the standard and competence of students and graduates of GMIT's Architectural Technology programme.

This Accreditation is of paramount importance to the profession and the general public in the procurement of construction projects. GMIT is delighted to work with CIAT into the future to ensure our graduates meet the standards required and are formally recognised as competent Architectural Technologists within the sector."

Students enrolled onto the programme are aware of the significance of this designation. The Centre's Education Officer, Michael O'Keeffe MCIAT, discussed with students their views on membership and career progression earlier this year. Prior to receiving Accreditation, two GMIT students were Finalists in the 2018 Student Award for Excellence in Architectural Technology. Irene urges students to enter the annual AT Awards and avail of benefits such as free membership and becoming involved in aspirATion.

As members, Architectural Technology lecturers are also members of the Irish Architectural Technology Educator Forum (IATEF). Members' meetings help scope out areas for research collaboration. GMIT for instance is part of the Connacht-Ulster Alliance along with IT Sligo and the team from Letterkenny Institute of Technology as all three institutions work towards Technical University status designation.

GMIT is also working on international links to develop graduate career opportunities further afield and grow the body of research output from the profession, working with CIAT on these objectives. Overall, there are five higher education establishments in the Republic of Ireland offering an Honours degree with a few others offering an Ordinary degree or a certificate/advanced certificate in Architectural Technology. ■

CIAT's first Accredited programme in the United Arab Emirates

Words by Allan Louie Torio Lompot ACIAT, Assistant Professor. School of Design and Architecture, MAHE Dubai

In May 2018, an opportunity to teach as an Assistant Professor was offered at the School of Design and Architecture (SoDA) at Manipal Academy of Higher Education Dubai (MAHE Dubai).

Little did I know that plans for Accreditation from the Chartered Institute of Architectural Technologists were already brewing through the efforts of our Bachelor of Architecture (B.Arch) Programme Coordinator (2012-18), Dr Bhakti More. My other responsibilities include Examination Cell Co-coordinator and Quality Pedagogy Coordinator. It is with the latter designation that I became involved in the documentation process for CIAT Accreditation, under the guidance of Dr Shaji Panicker, Research Coordinator at SoDA.

Internationalisation of Indian private higher education and the emergence of UAE as a regional education hub in the Middle East and North Africa (MENA) region were two major pretexts for MAHE Dubai, and to focus on international accreditations. As part of our institution's larger initiative, SoDA began its international Accreditation with CIAT.

International Accreditations, such as that from CIAT, play an important role in reassuring the quality of education provided by an institution. In the current times of globalisation and rapid technological disruptions, it is extremely important to remain above the crowd through innovative ideas and practices. At SODA, the team is constantly seeking means to raise the bar of its architectural education to be one among the best in offering architecture and related programmes in this region.

While the Accreditation process was a challenging experience, it was also rewarding. CIAT was very efficient in providing references, feedback and assistance at several stages of the process. Email correspondences and queries were immediately answered; examples were given for us to understand the details of the documentation process. Everything was conducted in an efficient and professional manner. A CIAT delegation visited MAHE Dubai in October 2018 as part of its Presidential tour, where expert talks by the panel members were both informative and refreshing to faculty and students. David Comiskey MCIAT, Senior Lecturer for Architectural Technology at Ulster University presented on the technical aspects of BIM, which was highly appreciated. Similarly, the engaging talks by Joe Healey MCIAT, Francesca Berriman, Chief Executive as well as Alex Naraian PCIAT were very practical and eye-opening.

MAHE received the initial CIAT Accreditation in May 2019. In fact, as far as Indian institutions offering the Bachelor of Architecture Programme are concerned, MAHE was the first to obtain CIAT Accreditation. Professor Sam Allwinkle PPBIAT MCIAT, Chair of CIAT's Education Board said "the Programme at MAHE is a welcome addition to the Institute's portfolio of Accredited Programmes demonstrating the breadth of knowledge that can prepare those interested in a career in Architectural Technology."

MAHE's Chairperson, Dr Ashok was invited to present his research paper titled 'Technological Domain – Paradigm Shift in Students – Approaches to Learning in Architectural Design' at the CIAT Conference in New Delhi, India in April 2019 and urges other educational establishments to seek CIAT Accreditation. Finally, MAHE can legitimately claim that it is offering internationally Accredited higher education to our globally competitive student cohort.

This recent CIAT Accreditation, as an institution, is just another feather in the cap of MAHE Dubai, but for the SODA this Accreditation is considered an honour and special thanks to CIAT for recognising our focus for quality architectural education. ■

The School of Design and Architecture's Bachelor of Architecture Programme at Manipal Academy of Higher Education, Dubai was the first amongst 532 Indian Architectural Institutions regulated by the Council of Architecture, New Delhi, India to receive CIAT Accreditation. We consider this an honour and thank CIAT for recognising our focus for quality architectural education being offered at the Dubai Campus.

Dr Ashok Ganapathy Iyer, Professor and Chair, SoDA, MAHE Dubai.

CIAT expands its reach into China

Tara Page and Francesca Berriman with representatives at Sichuan College of Architectural Technology

Words by Tara Page, International Director and Francesca Berriman MBE, Chief Executive

Following a very successful visit by the Architectural Society of China (ASC) in May 2018 where CIAT had the opportunity to introduce Architectural Technology as a distinct discipline and profession, as well as showcase student work from the University of Westminster, the Institute invited the Society to enter into a collaborative arrangement.

This agreement allows the two organisations to share information, knowledge and best practice, which in turn promotes the skills, competences and professions of members from both CIAT and ASC.

With agreement from both organisations Boards, a CIAT delegation consisting of Francesca Berriman MBE and Tara Page were invited to China to formalise the arrangement.

At the end of October 2019, the delegation embarked on a four-day tour of China, visiting three cities in three provinces (Beijing, Chengdu and Nanjing), meeting with four educational establishments who offer Diplomas, Bachelor degrees and Masters degrees in architectural subjects, and signing the collaborative arrangement with the ASC executive team.

Architectural Society of China (ASC)

The ASC is a national academic body which was established by architectural science and technology professionals in China in 1953. The Society brings together outstanding experts and scholars within the field of architecture and is viewed as a thinktank to the government in promoting urban and rural development.

Throughout the trip to China, the CIAT delegation was hosted by the Vice-President of the Architectural Society of China, Ms Zhao Qi and the International Director, Mr Xiaojing Wang.

Our first meeting was with ASC where we met their new Secretary General, Mr Li Cundong, and refreshed each other on our organisations, our philosophy, aims and objectives.

Tara and Francesca with Zhao Qi (centre) of ASC

Francesca studies students work at Sichuan College of Architectural Technology

We had a lively discussion regarding the competence of Chartered Members, their academic achievement and their position and standing within the UK's built environment sector; and we learned about the process behind becoming a registered architect in China. This was followed by the formal signing of the Collaborative Arrangement by Mr Li Cundong and Francesca.

The objectives of the Arrangement are for both organisations to collaborate on the following areas:

- Support and promote each other's discipline, organisation, activities and publications where appropriate;
- Attain recognition of the disciplines, competences and skills of members of both organisations nationally and internationally;
- Facilitate networking and support for both organisations' members and external partners, including universities;
- Work together on projects and initiatives relating to architecture and Architectural Technology including jointly producing material or reproducing each other's material;
- Advise and support each other and share information and best practice;
- Exchange and respond jointly to consultations.

The ASC's objectives are to:

- Promote the development and prosperity of Chinese architectural culture;
- Implement the country's strategy of invigorating China through science, technology and education;
- Implement a sustainable development strategy;
- Unite architectural professionals;
- Encourage and nurture the academic development of architectural science and technology;
- Promote the growth and progress of architectural professionals;
- Serve the national urban and rural construction development.

The ASC has around 100,000 members including corporate, fellow and student members within the field of architecture. It has ten working committees (i.e. Boards) and 44 sub-institutes consisting of professional institutes and academic/professional committees.

Professional registration for architects was introduced in the 1990s in China and the ASC now holds responsibility for the Ministry of Urban and Rural Development's Register of Architects. In 2012, the Chinese Ministry of Education divided architecture into three areas – urban planning, landscape architecture and architecture.

Architectural education at university level (Bachelors degree) has a five year duration and at college (Diploma), three years. There are approximately 300 universities and eleven technical colleges offering architectural education in China.

In order to become a registered architect in China, architects must undertake five years of study and three years of practice before being eligible to undertake the necessary examinations to professionally qualify, consisting of six written and three drawing exams. The average duration to complete the academic study, practice experience and professional examinations is between thirteen and fourteen years.

Between 1995 and the present day, 140,000 candidates have taken the exams, with 30,000 being successful. There are 26,000 registered architects (this is first class or level one registration which means no restriction on building type/size). Since 1990, 400,000 individuals have studied architecture and undertake design, but do not necessarily certify projects.

In the 1990s, there were only 40 universities offering programmes in architecture with approximately 3000 graduates per year. There are now 300 universities with 18,000 graduates. Considering the rapid rate of construction in China recently, the number of architects or architectural students remains relatively low.

University visits

For us, this was very much a fact finding visit with an introduction to the education in architecture and Architectural Technology across three very different universities and one college in three different cities: Beijing, Chengdu in Sichuan Province and Nanjing in Jiangsu Province.

The visit also provided us the opportunity to introduce CIAT and our definition of Architectural Technology as an academic discipline and profession. We were very grateful to both Zhao Qi and Xiaojing Wang who supported us in our presentations.

Following these introductions, we were fortunate to have very open discussions both at the meetings and also at a lunch and/or dinner hosted by the academic institution regarding where and how we can work together. There was also the opportunity to view the facilities on each of our visits.

Beijing University of Civil Engineering and Architecture (BUCEA)

The first visit was to the Beijing University of Civil Engineering and Architecture where we given a tour of the campus and facilities. The University has ten school and 35 programmes in architecture and engineering; offering Doctoral degrees in architecture, civil engineering and architectural heritage protection. The architecture undergraduate programme sits within the School of Architecture and Urban Planning. Other schools include the School of Environmental and Energy Engineering and the School of Electrical and Information Engineering. The University has partnerships with approximately 70 other universities in the fields of architecture, landscape architecture, engineering, environmental design, industrial design and architectural heritage protection.

Southwest Jiaotong University

We then flew to Chengdu to visit the Southwest Jiaotong University which was founded in 1896 and is one of China's oldest higher education institutions and top universities. Southwest Jiaotong University's School of Architecture has a focus on rail infrastructure and transportation. The University has three campuses including the Jiuli campus, Xipu campus and the Emei campus which is located in the Emei Mountain Scenic Area, a UNESCO World Heritage site.

The University has long-term partnerships with over 190 universities and institutions across more than 40 countries and regions including the International Union of Railways, University of Leeds, University of Illinois at Urbana-Champaign and Technical University Munich.

Southwest Jiaotong University boasts the largest school of architecture in the country, with 2500 students from undergraduate level to PhD. The delegation was given a comprehensive tour of the facilities of the school and shown work of the architecture students. The school had excellent facilities including ample studio space, materials testing labs and a large library.

The delegation had the opportunity to present to the university staff and there was an animated discussion on Architectural Technology in education and practice.

Sichuan College of Architectural Technology (SCAT)

The next visit was to the vocational College SCAT, established in 1956, with 80,000 students. It possesses an area of around 1.42km^2 over two campuses and the College specialises in civil engineering, transport engineering, mapping/surveying engineering, materials science and related areas.

Since 2005, the College has been involved in international co-operations with other academic institutions such as Lincoln College and VIA University College in Denmark. Graduates from SCAT have gone on to work in South East Asia, Europe, Africa and the Middle East and the College's graduate employment rate is more than 95%, with most graduates going on to work for medium and large sized practices. Graduates normally become architectural assistants and their primary role is to interpret engineers/ architects' drawings, but they are also able to work in rural areas and undertake smaller projects.

There are more than 2000 universities and colleges in China (1000 universities and 1000 colleges) and SCAT is in the top 100 exemplary schools, and one of the top four Architectural Technology colleges in China according to the Ministry of Education. Professor Hu, President of SCAT is the Director of the ASC Committee to lead and develop standards in AT related subjects.

The delegation was given a presentation by the College which offered an insight into the development of programmes they offered, which are driven by market needs. According to the National Register of Architects in China there is currently a need for Level 2 architects, i.e. architectural assistants, which the College is ideally placed to produce. These graduates are required to have three core skills: to produce construction drawings from the architect's drawings; to be able to use a range of

> **The visit also provided us the opportunity to introduce CIAT and our definition of Architectural Technology as an academic discipline and profession.**

different software types and to develop their own small/medium sized projects and the rationales behind them.

The College has a high employment rate of over 98% and an increasing number of students go onto work for top rated design companies. Graduates are also employed by state-owned, public and private sector organisations.

The objectives of the College include ensuring its activities are current and relevant and, in line with government strategies, on infrastructure, renovation, urbanisation governance, development of rural areas and undertaking practice based and academic research. Furthermore, the College aims to educate others in society, upskill construction workers and keep up with industry developments.

Southeast University, Nanjing

Our final visit was to the Southeast University which had a rich academy history dating back to 1927 and makes claim to the earliest iteration of modern architecture education, having the longest running architecture programme. The architecture programme sits within the top three in the country. As well as being ASC's Director of the Committee on Architectural Subjects (which is to guide all 300+ universities in China and run their annual conference), Professor Jianguo Wang, Professor of the School of Architecture is also the Editor-in-Chief for the international publication, Frontiers in Architectural Research.

Alongside the architecture programme, the University offers civil engineering, transport engineering and other architecture specialisms from undergraduate to PhD level. As is the case for other universities, the duration of the architecture programmes are five years for undergraduate, three years for Masters and four to five for PhD.

Normally, there are approximately 180 students per year that apply to enter the School to study urban planning, architecture or landscape architecture. For the first two years the students study the same modules and after year two they will continue with their chosen pathway. All three programmes cover areas such as design, construction, history, urbanisation, landscapes and tectonics.

The five-year architecture programme has two semesters per year with each semester being eight weeks in duration. Students undertake a variety of workshops including site construction, art and media and design and construction. The final project is a work-based project carried out at a design company where students are involved in a range of aspects of the project. Students will undertake an internship and are assessed on the job by the project lead (usually the chief architect).

Masters programmes in architectural subjects use the ideology of conceive, design, implementation and operation. The Masters are a combination of study, research and practice, and they are theory based in year one, practice based in year two, and in year three students undertake a dissertation and project work. There are more Masters students per year (230) than those studying at Undergraduate level (180).

The School has international collaborative agreements with various universities including in Turin and Milan, Italy where they are able to attain a double degree.

Simon Gallagher MCIAT, Centre Chair with MAK Hon Kuen HonMCIAT MCIAT

Francesca with representatives at Southeast University

Next stages

After a busy few days of lively discussion and outstanding hospitality, the delegation returned to the UK to develop how we can make real progress and forge closer and sustained links with ASC and potentially with the educational establishments. A detailed plan based on the collaborative arrangement is being prepared. We have already been in communication with all those we visited with some additional actions already been undertaken. We will also be providing additional promotional and procedural material as well as videos showcasing the work of our members and students

The five-year architecture programme has two semesters per year with each semester being eight weeks in duration. Students undertake a variety of workshops including site construction, art and media and design and construction. The final project is a work-based project carried out at a design company where students are involved in a range of aspects of the project. Students will undertake an internship and are assessed on the job by the project lead (usually the chief architect).

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Visit to the Hong Kong Centre

En route to China, the International Director took the opportunity to make an important visit to the Hong Kong Centre to maintain our strong relations with the members and discuss issues pertinent to them. As CIAT international development continues with activity increasing across all its seven Centres, it is important to remember that Hong Kong was the first Centre established in 1984 and set the benchmark for the

Institute's international operations for many years. This strong relationship and understanding of how CIAT can work overseas helped us to evolve our international strategy.

The principal purpose for the visit was to engage and support the members based in Hong Kong and a meeting was held which included discussion around working with other related organisations, potential restructure of the Hong Kong Centre and its implications, membership growth and CPD and external event sponsorship.

A full report is being prepared with actions being prepared for Executive Board's meeting in February 2020.

Welcoming a new Chartered Member

In addition to the Centre meeting, one Professional Assessment Interview was undertaken with the candidate successfully attaining Chartered status. The candidate, Eddie Lai, holds academic qualifications from Canada and UK, along with experience of working in Hong Kong, Macau and mainland China. ■

What really came through in conversation was how supportive the practice is towards staff looking to advance their careers.

Taking great Strides towards Chartership

Words by James Evans, Communications & Digital Administrator

Stride Treglown is an established employee owned architectural practice who are placed in the top 15 practices in the AJ100. They have regional offices throughout the UK including Bath, Birmingham, Cardiff, London, Manchester, Plymouth, Solent, Truro and their head office, which is in a Grade 2 star listed office space, in the heart of Clifton, Bristol. With a wide range of experienced staff working across all sectors, 'Strides' (as it is affectionately referred to by its staff) works on a variety of interesting projects from ports to higher education builds.

In the summer issue of *AT Journal,* the multi-disciplinary practice was ranked second in a list of employers recognised for its investment in employing Chartered Members. I was keen to learn what it valued about Chartered Architectural Technologists and why so many had found a home at Stride Treglown.

Everyone I have spoken to here, describes Strides as great place to work. Karyn Williams MCIAT, a Senior Associate Technologist talked about a strong business focus on creating a supportive culture and Nicholas Price, a recently qualified Chartered Architectural Technologist, said "it's like one big family".

What really came through in conversation was how supportive the practice is towards staff looking to advance their careers. Nicholas told me the company is "very keen for people to achieve the best for themselves". Karyn said "there is a focus and clear drive in the office culture which centres around coaching and mentoring" and one of the great things about working for the practice is that employees "can specialise in areas of interest, whilst still undertaking the more traditional technical role on projects, building in true flexibility for their business to adjust and react to the evolving workload." By upskilling their growing team and investing in a culture which encourages active career progression, Strides gain only to maximise their productivity without losing sight of employee job satisfaction. The remit of a Chartered Architectural Technologist at Stride Treglown is significant. Here, they can run projects or working as a key part of a team, involved in both the design and technical delivery of projects. Anthony Walsh MCIAT, Divisional Director, has been key to the promotion and value offered by the Technologist role, ensuring that they become integral in internal design reviews advising on technical considerations before critical project milestones, such as planning and construction. He is passionate to see this technical expertise appear as early as possible in a project, featuring more at stages one and two of projects to get the quality, compliance and detail focus buy in from the outset. Nicholas explains "there are no limitations to what you can achieve as an Architectural Technologist" at the company.

It is clear that Stride Treglown places great value on their Chartered Members. Karyn – who has mentored several individuals with their applications for Chartered Membership told me that the support radiates outwards from the board of directors who have a clear understanding of the importance of the Chartered Architectural Technologist's role. Anthony, a director and Chartered Architectural Technologist himself, told me that whilst Technologists generally get more involved in projects in stages three and four (indeed, this is where their efforts are largely focussed at Strides) more generally they "have an idea of what design is about, be that aesthetic design or more binary technical solutions" hence his aforementioned keenness to see them involved at earlier stages.

Chartered Membership is something the practice recognises and values. Anthony believes that becoming Chartered shows "you have the right skillsets, professionalism and experience to be recognised amongst our fellow built environment professionals." This is a clear message that echoes across the business and especially to those beginning their journey towards MCIAT. Michael Van Glass, a Senior Technologist ACIAT is currently working towards Chartered Membership himself and tells me that he believes it reflects a level of professional competence.

The practice is very keen to see more of its staff reach this stage and I visited the practice on the same day that James Banks, Membership Director, was running a 'Membership Progression Session'. Strides not only invited James but also had several Chartered staff who had been through the process to give presentations about their experiences. It was a well attended session and delegates travelled from a number of their offices. After the presentations the floor was opened to questions with James, Karyn and Anthony who were on hand to provide guidance. Stride Treglown offer their applicants time off to prepare and support too extends to cover membership and application fees. This support extends beyond this with mentoring guidance, mock interview process and encourages friendly competition with a 'buddy scheme', but perhaps the most valuable way in which they help is to simply encourage and demystify the process. Nicholas said that the practice is keen to spread the message that "this isn't out of your grasp" to aspiring professionals. For him they "didn't put it on a pedestal" and "made it seem really achievable". He became Chartered in March of this year.

Nicholas was also keen to talk about how straightforward and painless the Chartered Membership process was. He said it was "a lot more straight forward than I thought it was going to be". He pointed to support from Central Office and friendly interviewers make you feel comfortable and "are not there to catch you out", but are keen to understand about your individual experience. Strides benefit from a cohort of experienced Members who sit regularly on the Membership Assessment Panels and Professional Interviews and disseminate this experience to allow applicants to prepare and arrive confidently on the big day. Karyn talked about her application in 2014, how she was part of a group of staff in her office (Cardiff) who were going through the process at the same time. This was useful, using "each other as a competitive mechanism" she told me. This is something Strides are now keen to promote in their other offices.

Anthony wants more people reach this stage. He is determined to see "the balance swing to have more Chartered Technologists than non" amongst the technical staff at Strides. It will only take two more individuals becoming Chartered to achieve this milestone and the membership meeting in the head office has certainly spurred the team on to meet this challenge. Anthony talks about what becoming Chartered meant to him and he is keen to share this with others. Moreover, both Karyn and Anthony are keen to "accelerate the numbers" of Chartered professionals in the industry and encourage new interest at a grass roots level in an Architectural Technology career.

Stride Treglown has evidentially embraced Chartered Architectural Technologists and strongly encourages achieving this professional status. Staff have seen their potential and skills recognised and have been encouraged openly to work towards achieving Chartered status. Demystifying the process and providing support has been crucial and as Stride Treglown continue to add to its team of Chartered professionals it will be fascinating to see what's in store for this exciting practice.

Gordon Souter MCIAT, Honorary Secretary, oversees the votes

2019 AGM and Presidents' Ball

The AGM and Presidents' Ball took place in Glasgow, Scotland over the weekend of 8–9 November, with the events hosted by the Scotland West Region.

The Friday night social evening, organised by Region 13, began with a Civic Reception at Glasgow City Chambers. Bailie Glenn Elder opened proceedings, welcoming attendees to the city of Glasgow, before an evening of traditional Scottish ceilidh dancing. StreetConnect, a Glasgow based charity, who support disadvantaged individuals in their recovery from a variety of life controlling issues, were the chosen charity for the evening, where a generous amount was raised in donations and ticket sales.

The Institute's 14th Annual General Meeting, held at 200 SVS, included the unanimous approval of the accounts as well as the authorisation to Council to appoint the auditors. There were eleven Resolutions debated and voted on by the Voting Delegates, made up of representatives from the Regions and Centres.

The following were approved unanimously:

Resolution 1
To amend the Bye-laws, Conduct and Disciplinary Procedures and Code of Conduct to be gender neutral.

Resolution 2
That under Bye-law 4. the Institute introduces a new class of membership: Fellow, with the privilege to use the post nominal letters, FCIAT.

Resolution 3
That under Bye-law 4. the Institute introduces a new class of membership: Honorary Fellow, with the privilege to use the post nominal letters, HonFCIAT.
Majority 55 for, 3 against

Resolution 4
That the Charter and Bye-laws be amended for the addition of the new class of membership: Fellow.

Resolution 5
That the Bye-laws be amended for the addition of the new class of membership: Honorary Fellow.

Resolution 6
That the Institute introduces the descriptor CIAT Chartered Practice.
Majority 56 for, 2 against

Resolution 7
That the Conduct and Disciplinary Procedures be amended for the addition of the new class of membership: Fellow, and the implementation of the affiliate status.
Majority 56 for, 2 against

Resolution 8
That the Institute introduces the descriptor CIAT Chartered Practice.

Resolution 9
That the Charter and Bye-laws be amended to provide for the use of 'CIAT Chartered Practice' as a descriptor.

Resolution 10
That the Code of Conduct be amended to provide for the use of 'CIAT Chartered Practice' as a descriptor.

Resolution 11
That the Charter, Bye-laws, Code of Conduct and Conduct and Disciplinary Procedures be amended to improve consistency, language and currency of references.

Post AGM action

As a Chartered Body regulated by The Privy Council and as the Resolutions require changes to the Charter, Bye-laws and Code of Conduct, they will now be formally submitted to The Privy Council for approval. The Privy Council has already given its approval in principle.

Due to the election where Government is purdah and also due to the work around Brexit, this may take a few months.

The Executive Board meets in early February 2020 to sign off the implementation and transitional processes which we hope will commence from 1 May 2020.

Until The Privy Council and the Board have approved these documents and processes, these changes do NOT take effect. Please look out for further information early next year and how it may affect you. If you have a Registered Practice with CIAT, we will contact you directly sponsor Xtratherm.

If you have any questions, please contact:
Membership: membership@ciat.org.uk
Registered Practices: practice@ciat.org.uk

In his closing President's address, Alex Naraian spoke of the highlights of his term, including international visits to Dubai and India, as well as the development and growth of the Institute.

Eddie Weir PCIAT was inaugurated as the 29th President of CIAT and addressed the delegation outlining his vision for the next two years during his Presidency. Eddie touched on items of significance for CIAT such as Brexit, the climate emergency, the continuing work in relation to Grenfell and Scotland in ensuring we are 'Building a Safer Future' and broadening the work regarding equality and diversity within the built environment sector.

The last Presidents' Ball was held in the evening at the Grand Central Hotel. Following the drinks reception, guests were welcomed to dinner by Jim Malcolm, Scotland West Chair. The Gold Awards were announced and presented. Music from The Woohoo Band with plenty of dancing rounded off another fantastic year for CIAT and was a perfect way to conclude the AGM Weekend in its current format.

With grateful thanks to our sponsor Xtratherm.

Meet the President: Eddie Weir PCIAT

Words by Adam Endacott, Editor

Eddie Weir became the Institute's 29th President at the AGM held in Glasgow and *AT Journal* finds out more about his aims and objectives for the next two years.

Inspire, promote and support

What do you hope to achieve over the next two years?
I believe that all professionals should be united in the aim of making our built environment sector one of co-operation with the ultimate objective to create beautiful buildings and structures that are fit for purpose, sustainable, accessible and safe. To that end, my intention is to continue to support and develop the outstanding work of our taskforces which are working on a wide range of initiatives such as:

- Building a safer future, ensuring failures such a Grenfell cannot happen again.
- Taking action and working with members on the 'climate emergency' and attaining the UK Government's zero carbon commitment.
- Our ongoing international development and growth of the discipline.
- Ensuring that our policies, position statements and principles are current and relevant.
- Our 'Open & Fair Competition in Procurement' initiative will promote to public sector procurement departments that Chartered Architectural Technologists are qualified and best placed to bid for projects as lead designers and economic operators.
- The implementation of our public-bodies engagement and promotional information initiative.

I will also be working on broadening and advancing the great work that we are doing to promote equality and diversity within the built environment sector to ensure that all of our Architectural Technology professionals are treated equally regardless of their gender, colour and sexuality.

Do you find the role of President daunting or are you looking forward to your two-year term?
No, I don't find the role daunting at all! However, I feel an immense sense of responsibility in representing this wonderful Institute and the profession of Architectural Technology, and no less so having had the opportunity to do this as President Elect. For me, the past year has been incredible and the support and kind wishes that I have received from our members and the wider built environment has been truly humbling and very much appreciated. I am thoroughly looking forward to the next two years as your President.

> I feel an immense sense of responsibility in representing this wonderful Institute.

You joined the Institute in 2001, can you let us have a brief resume of your career?
Since joining the Institute, my career has been spent running my own practice ADP which is a design and technically led practice based in Holywood, County Down. We have a pretty wide-reaching portfolio of project types, but ADP is recognised mostly for designing bespoke specialist healthcare projects throughout the UK and Ireland for the private and public sector. Although it seems such a long time ago, I have enjoyed being actively involved with the Institute both Regionally and nationally ever since. Before starting ADP, I worked in practice for both the civil service and local Government housing associations. It has been quite a wonderful journey doing the job that I absolutely love.

You run your own practice, how do you think you will find balancing Institute work with your practice work?
We have a pretty amazing and wonderful team at ADP who are also passionate about all things Architectural Technology and CIAT. They have been doing a brilliant job over the past four years or so looking after everything, whilst I carried out my Vice-President Practice and President Elect duties. They are used to me being away from the practice whether that would be in London (my new second home) or for the committees I represent the Institute on, here in Northern Ireland.

What will you bring to your Presidency as a practitioner?
I would say my experience, alongside what I believe works and what can realistically be achieved in the long and short term. With that, I have a great understanding of the support that our members need and of the problems that they may face. The initiatives that I have been championing will encourage participation and I hope that it inspires other practitioners to get involved.

As a former Vice-President Practice, do you feel this has helped shape your visions for the future and how your Presidency will unfold?
Most definitely, yes. I have made no secret to the fact that I have absolutely loved working with our Practice and Technical Department. We have been able (over the past four years) to work on the development of many projects and initiatives. Some of these are closely aligned with my manifesto focus points of inspire, promote and support. If you scrape the surface in everything that I am doing, you will see that one or more of these focus points is obvious.

What has been the proudest moment of your time so far with the Institute?
There have been so many, I am delighted and thrilled to see the success and evolution of Northern Ireland's YATN (Young Architectural Technologists Network) into our global aspirATion Groups. It is wonderful to see how healthy our succession plan is, you only need to look at our new Council members to see how the younger demographic has come to the fore. If I was to choose only one, then there is nothing that can compare with walking to the lectern at the Presidents' Ball in Glasgow to that wonderful rousing reception – it was truly remarkable.

How do you plan to promote and develop the profession/Institute?
This is an incredible time to be an AT and I will continue to raise our profile in everything that I do. As a global organisation, we must continue to improve our communications and visibility by educating and promoting to the wider general public, as to the value the expertise of our members have to offer.

Our biggest advantage and value come from the fact we are able to consider design holistically by applying our broad range of knowledge. On a world platform we are held in high esteem by our peers. The contribution, views and the stances we take matter. However, we must not be complacent about this and must continue to grow and enhance our Centres and the great opportunities that comes with this.

We are about to embark on what I personally believe to be one of the most exciting and important promotional campaigns to public bodies. I have no doubt this edifying exercise (which will be implemented in tandem alongside our public-sector procurement initiative) will raise our profile even higher and that the competences and importance of the roles and functions of Architectural Technologists and CIAT are second to none. To supplement this, I hope that it will encourage and inspire our members to be involved with their local Region or Centre.

Looking at the longer term, where do you see the Institute in the next five years?
I am thrilled to see that our new Strategic & Corporate Plans are now being implemented. Everything we do as an Institute and the decisions made by our Board is mapped against our Plans. This ensures that our resources are used wisely in a structured and organised manor. Our economic landscape is most certainly going to change within the next five years with a number of uncertainties. In considering our 2018-23 aims and objectives, we have to consider and take into account the challenges of BREXIT and the built environment skills gap. As an Institute we are continually raising our profile as the industry leader, considering this, our discipline will be in demand more than ever before.

When you are not involved with the Institute, what are your hobbies?
I have quite a lot of hobbies and many more interests. I just love making things and always have.

I have a very active mind and always have to be doing something. I used to do quite a bit of wood carving and sketching but I haven't carved for a while, but I am always looking out for lovely pieces of wood saying some day that will come in handy. I am an avid Ulster Rugby supporter, there is no better way to spend a Friday evening than cheering on the Ulster team at the Kingspan Stadium at Ravenhill.

If you were stranded on a desert island, what would you choose as your favourite book, film and song?
I mostly prefer to read reference type books so I suppose being the practical type person that I am, then my book would be, Tough Guides – How to Survive on a Desert Island. I love to laugh and could watch Dumb and Dumber over, and over again. I am a huge 80's rock fan but also love those quirky type ear-worm songs like One More Night by Yellow Dog... Ha! Google it and you'll all be singing it tomorrow! ■

Honorary Officer elections 2020: all you need to know

Words by: Francesca Berriman MBE, Chief Executive

The election process and how you could become influential within your Institute, shape its future and that of your profession.

For the effective operation for any professional body, it is essential that it elects positions from amongst its membership to allow it to function within its Charter. Such positions are open to Chartered Members who are invited to provide their experience, skills and time in a voluntary capacity to the work of the Institute set within the Strategic and Corporate Plans approved by Council. Contributing in such a capacity is two-way and Members who have been involved have benefited and learnt from their experiences.

Within the Institute's governance, there are a number of core roles collectively known as the Honorary Officer positions. These encompass the President, Honorary Secretary, Honorary Treasurer, Vice-President Education, Vice-President Practice and Vice-President Technical. These are all undertaken by Chartered Members in a voluntary capacity other than expenses which are paid for by the Institute. This year there are three positions for election which are now open for nominations:

1 President Elect/ President

President Elect is a twelve-month role prior to succeeding as President. The President-Elect position provides the elected Member the opportunity to gain an insight into the activity and role of President, working with the incumbent President, fellow Honorary Officers and the Executive Board. The Member becomes President Elect from the close of business at the AGM in the year they are elected.

President

The President is the principal external face for CIAT, the discipline the members and the profession. The Institute works as a team and the position leads the team working with Council, the Executive and the Chief Executive implementing the Strategic and Corporate Strategy.

One of the principal roles for the President is external engagement, with members, fellow professionals, organisations at national and international level as necessary.

Serving for a period of two-years, the President will, amongst other functions:

- Chair the AGM (x2) and Council meetings (x4);
- Chair Executive Board (4 per year);
- attend as a guest and representative of the Institute at various industry events;
- meet with Presidents, senior officials, industry bodies and Government Ministers (from different nations) and personnel;
- visit the Region/Centre (not mandatory, but to respond where invited); and
- present on the Institute's key strategies and the Strategic Plan.

Members who undertake this position must possess strong analytical skills and the ability to make informed decisions and considered judgments. The ability to interpret and understand information along with excellent communication and presentation skills.

2 Honorary Treasurer

The Honorary Treasurer main role is as Chairman of the Finance Committee. The Finance Committee, works with the Chief Executive and the Finance Department, to oversee the financial matters relating to Institute business such as the budget, the setting of subscription fees and reviewing and approving the independently audited accounts; and make recommendations regarding finances to the Council and Executive Board. The Honorary Treasurer also presents to members at the AGM and reports via the Annual Review. Members who undertake this position must possess strong analytical skills and the ability to make informed decisions and considered judgements. A good understanding of financial processes and ability to disseminate financial statements.

3 Vice-President Technical

The Vice-President Technical works closely with the Vice-President Practice, Practice & Technical Director and Practice Department and its relevant Taskforces in overseeing the technical issues relevant to the Institute, which ensure the maintenance and improvement of standards within Architectural Technology and the built environment. The role also embraces current industry issues and the setting the criteria for the Practice AT Awards together with acting as Chair of the Judging Panel.

The Vice-President Technical works to develop Institute position papers on issues affecting the Architectural Technology profession and the built environment sector. They lead on consultations which affect practising Architectural Technology professionals and represent the Institute externally, as necessary.

The Vice-President Technical reports to the Council and Executive Board on the work relating to technical issues from the groups and their output and that of the Practice Department. In carrying out these activities it is essential that the Vice-President Technical:

- represents the members externally relating to technical issues, lobbies for change or improvement and lobbies and promotes on behalf of the discipline;
- ensures the necessary documentation is produced for the membership's benefit on changes in legislation or regulations; and
- ensures the appropriate guidance is available to assist members both in implementing and complying with legislation and regulations in their work and complying with the Institute's policies and Code of Conduct.

A Member undertaking this position must be a practising Chartered Architectural Technologist and have knowledge of the technical aspects of Architectural Technology with an understanding of legislation and regulations.

They must also be confident and able to represent the discipline at the highest level which includes at Government level.

All candidates must be able to undertake business via email or other electronic mediums.

What do these positions involve?

With each of these positions you will become a Trustee of CIAT and a member of the Executive Board, which is responsible for the implementation of the Strategic and Corporate Plans, which can be found on our website. The Board makes guidelines for the conduct of business of the Institute, in line with the rules of the Institute and policy. You will also become a member of Council, which is the Electoral College and Strategic Forum for the Institute. You will be expected to contribute to the policies and future strategic development of the Institute.

What does being a Trustee involve?

Trustees have an overall legal duty to the Institute and are the individuals who take decisions. Trustees have specific duties and operate within the rules of the Institute. Trustees work collectively as the Executive Board and once a decision has been collectively made – all Trustees are bound to support that decision.

A Trustee's primary duty is to the Institute and its Charter under which it is established, as such Trustees must act with integrity and adopt the values which helps CIAT achieves its strategic aims.

What are the time commitments to these roles?

You should be looking to commit up to five hours a week (approximately) but this will depend on the nature of the work, meetings, providing views and advice on documents, the time of year and external representation on behalf the Institute that may be necessary. It is essential you are proactive and reactive dependent on the project work required. With all the positions, you will be working closely with a staff Director at Central Office, and their departmental team and be expected to respond to queries speedily at times; this could be within a couple of hours. There will be specific meetings or working groups that you may need to participate in and possibly chair.

As an Honorary Officer you will be expected to attend two Council meetings (normally on a Saturday in March and September) and a minimum of four Executive Board meetings (two of which run in tandem with the Council meetings) as well as the Institute's AGM weekend (normally in November) and AT Awards presentation event (September).

The positions are two-year terms, which become effective from the close of the 2020 AGM in November to the close of the 2022 AGM.

Representing the Institute and discipline

As representatives of the Institute, these positions require you to attend events and meetings on behalf of the Institute, for example, Construction Industry Council meetings, Award presentations, university events, or Government led steering groups, presenting at conferences etc. There will be specialist meetings which you will either have to attend/chair or contribute to, and you will need to report back to Central Office on these. The staff Director will work with you to ensure that you are properly briefed and prepared for these meetings where you will be expected to speak on behalf of CIAT and the discipline of Architectural Technology.

Social media

You would work with Central Office staff in relation to social media engagement.

What do I benefit from taking on a position?

You will have the chance to shape the future of your Institute, your profession and the discipline at a strategic level. If you have ever wondered why something has or has not been done then now is your chance to do something positive about it. You also get to network extensively with peers and fellow professionals, gain a greater insight behind the scenes at Institute, Governments and sister institute levels and it contributes to your CPD obligations.

How can I be nominated?

To be nominated for any of the positions, a fellow Chartered Member must nominate you in writing to the Returning Officer, who is the Chief Executive. Any Chartered Member is eligible to propose a candidate, although no nomination is permitted without obtaining the prior consent of the nominee. Any Chartered Member is able to stand for any position in these elections. No prior experience is required of the Institute — just a passion for Architectural Technology and the Institute.

What happens once I have been nominated?

Once a nomination has been received, you are then asked to formally accept or reject the nomination. You will then be asked to write a manifesto. Once all the manifestos have been received, they will be issued to the Regions/Centres for their review, consideration and action. It is then your responsibility to actively organise and carry out your election campaign (at your own cost) to all members, this will be via the Communications Department and direct liaison with Regional and Centre Committees. Your campaign can be by a variety of mediums which is for you to choose. We provide you with the contact details of the Region/Centre Committees.

You will need to prepare a full manifesto for publication and distribution via the Institute's media channels; details of what we would be looking for in the manifesto will be included in the election section of the website and information pack. It will also be featured in the spring issue of *AT Journa*l.

We will provide further clarification on the election process and the information we would be seeking on the website. Over the election process, and the lead up to the elections in September, we will be issuing some election special ealerts providing reminders and updates together with profiles of the candidates standing for the positions etc.

If I stand how do I promote my candidacy?

There are a number of ways in which you can put yourself in front of the membership during your election campaign.

There is the traditional manifesto which will outline your policies, thoughts and aspirations for both the role you are nominated for and the Institute. This should not be a CV but a formal written document which grasps your key objectives and aims. Alongside this, you can create a profile which showcases you as a person, captures your personality and strengths and puts across the real you to people who do not know you and want to know more about the person seeking election.

In this technological and social media focussed world, you can create Twitter or Facebook accounts, videos, podcasts, blogs or a series of short films which support your manifesto and profile. You can get your message across simply and they can all be easily accessed.

You could arrange for a Q&A with the membership at a location and venue that is accessible and could have visits to Regions and Centres and meet with Council, those who will be voting on the day. There are a number of different mechanisms which will be covered in the information pack.

What is the voting procedure?

- Regional/Centre Committees are encouraged to meet and discuss their preferred candidate, in an open forum which takes into account feedback from the Region/Centre membership;
- It maybe that you wish to proactively engage with the Region/Centre

Committees to present your manifesto and respond to questions;
- Regional/Centre Committees advise their Councillor of their preferred candidate; and
- the Councillor is expected to vote in accordance with their Region/Centre's decision; however there may be exceptions where they may change their vote as per their Committee's instructions. These could be based upon the candidate's response at the Autumn Council meeting or other factors, for example, if the candidate withdraws from the election at very short notice that would not allow a Councillor reasonable time to refer back to their Region/Centre.

How is the vote taken?

Elections are held at the autumn Council meeting:
- All candidates are invited to attend the autumn Council meeting to respond to questions brought by Councillor from their Regions/Centres or to debate a particular issue in relation to their manifesto;
- Council confirms and agrees the method of the election – which has traditionally been by secret ballot;
- Councillors represent their Region/Centre – either using their agreed Committee's vote or changing their vote as per their Committee's instructions based upon the candidate's presentation or other factors;
- Honorary Officer members of Council have a free vote according to their preference (as Trustee) and considering the best interests of the Institute and its Strategic Plan;
- Council votes on the candidate and/or candidates and the election takes place;
- Council policy is that a candidate who is also a serving member on Council may not vote if there are other Candidates standing who do not sit on Council, this includes Honorary officers;
- Council policy is that Region/Centres do not have the right to send a proxy vote if their Councillor is standing for a position. It is the Councillor who carries the vote, or their deputy, in their absence. A serving Honorary Officer who is standing against a candidate who is not a member of Council forfeits their vote. This ensures equity and fairness;
- the President, as Chair, has the casting vote if there is a tie;
- the elected Member assumes the Officer position from the close of that year's AGM (normally in November), unless an Officer resigns from their position early, in which case the assumption is either immediate or from the date of resignation if later; and
- the results are then reported to the membership via the weekly ebulletin, AT and Region/Centre Committee.

When would I assume the position if I were elected?

All three positions take effect from the close of the 2020 AGM in November 2020.

Key dates summary

Call for nominations closed:
2 December 2019

Acceptances (or rejections):
19 December 2019

Manifestos/profile received:
3 February 2020

Issue of candidates and their manifestos to all members via an ealert/update of election section of the website:
24 February 2020

Issue of candidates and their manifestos to Regional/Centre Committees:
24 February 2020

Presentation at Council:
7 March 2020

Campaigning by candidates:
24 February – 3 September 2020 inclusive

Election ealerts and updates on the website:
24 February – 3 September 2020 inclusive

Election at Council:
4 September 2020. Candidates advised if not in attendance at Council

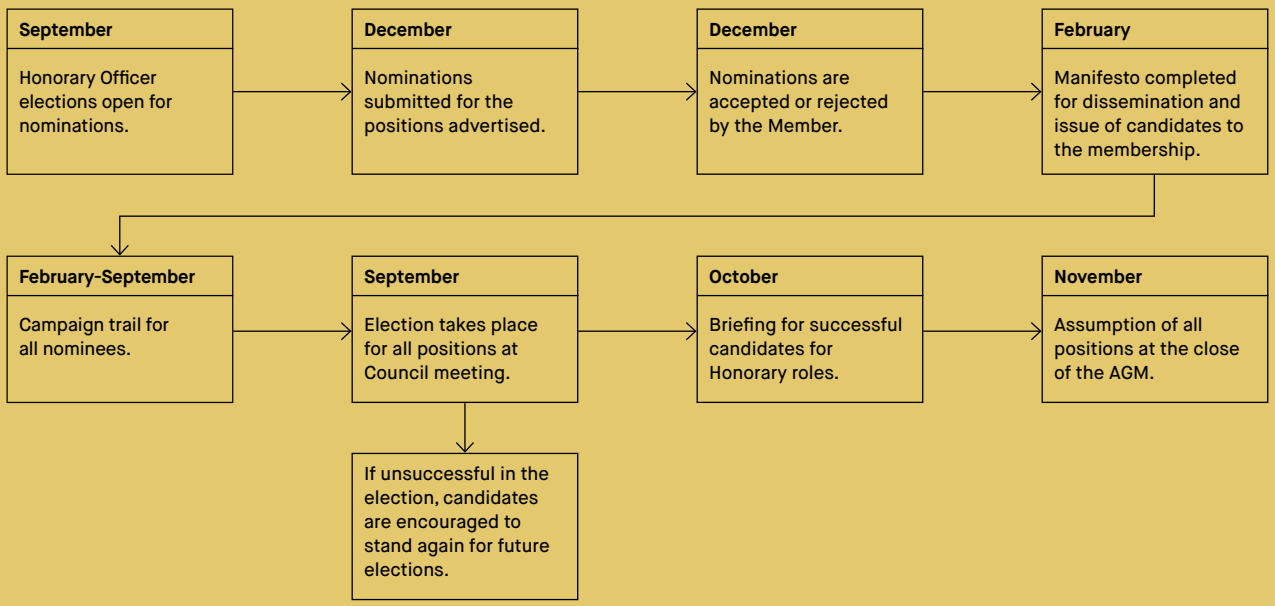
Ealert announcing the election results:
6 September 2020

Assumption of position:
November 2020 close of 2020 AGM

Further information

For further information or clarification contact Adam Endacott, Editor, adam@ciat.org.uk or call +44(0)20 7278 2206

Election flow chart



Gold Awards 2019: Celebrating outstanding Members

The Gold Awards recognise and celebrate the effort and commitment of Chartered Members who have demonstrated an outstanding service to Architectural Technology, be it the profession or the Institute. It is presented in the form of a medal, certificate and lapel badge.

It is the principal honour that the Institute can bestow upon its Chartered Members, it is reserved for people:

- who have changed, developed and advanced the Institute, particularly by solid, demonstrable and outstanding achievement; or
- whose work has brought outstanding distinction to Architectural Technology or enhanced the discipline's reputation.

At the Presidents' Ball, the recipients of the Gold Award were presented to:

Kevin J Crawford MCIAT
For dedicated service to the Institute and the profession

Kevin has worked, and continues to work, tirelessly to improve standards and raise the profile of CIAT and its membership. He has done this since his early involvement with the Scotland West Region in 1998 and subsequently through his time and energy with the Technical Committee and its Taskforces, all culminating in his successful election as Vice-President Technical in 2012. As Chair of the Projects Taskforce and Technical Awards Taskforce he lobbied for, and subsequently assisted in supporting and developing, the stand-alone event now known as the AT Awards; raising the Institute's profile further. As Vice-President Technical, he represented the Institute at the highest of levels which included the House of Commons where he addressed the Housing Standards and Scottish Standards investigation to deliver the outcomes of the Cole Report.

Dr Graham P Smith MCIAT
For dedicated service to the Institute and the profession

The main reasons for Graham's nomination are for his enduring dedication and service both to the East Midlands Region and to the Institute, as well as his continuous ambition and innovation within the Regional Committee. With his indefatigable commitment to the Regional membership and his eagerness to assist and mentor others, Graham does all this even with numerous demands in his own life and career. His immeasurable involvement and considerable influence within the built environment sector, particularly within the specialism of fire safety engineering, since the Grenfell tragedy has been incredible with his activism in fire safety regulatory making changes and improvements for the betterment of the industry and society.

BSA
Business Sprinkler Alliance

Want to learn how to achieve Property Protection & Business Resilience?

The Property Protection & Business Resilience CPD addresses how sprinklers work, typical myths and misconceptions, cost and regulations and looks at the impact of fire on businesses and how sprinklers can aid the design process.

It also examines design considerations for office applications including worked examples showing cost implications.

"Automatic sprinklers offer a proven way of protecting property as well as providing life safety. However there are many myths and misconceptions about their operation, effectiveness as well as cost. The CPD addresses these misconceptions whilst providing practical design guidance to help specifiers, contractors and engineers understand how sprinklers can add value to their next project."

Iain Cox, Chairman of the Business Sprinkler Alliance

CIAT ACADEMY

CIBSE CPD

CPD MEMBER The CPD Certification Service

Find out more at: www.business-sprinkler-alliance.org/onlinecpd

OBITUARY

Helena LEE Chui-lin MCIAT

28/10/1954 – 24/08/2019

Words by MAK Hon Kuen HonMCIAT MCIAT

The news of sorrow reached to most of Helena's friends in the morning of 24 August that she had passed away in her sleep at home. It was all a terrible shock with the sudden sad news.

Helena had been one of the Hong Kong Centre's bearers and Councillor over many years. She had so many wholehearted contributions to the Centre's local activities and gained friendship from all the local members. She had represented the Centre by attending the AGM Weekends many times and developed good links with Central Office and UK members. She was one of the main pillars of the Hong Kong Centre and the loss of Helena means she will be greatly missed. Her charming and cheerful character and hearty dedications to the Institute will be deeply remembered by our members.

Helena joined the Hong Kong Housing Department in 1977 as Technical Officer (Architectural) and retired as Chief Technical Officer/Training (Act) in 2014. Most of her working period was in a managerial roles and received co-operation and respect from all her colleagues.

We can be glad it was our privilege to have come in contact for as long as we did with Helena, who was such a very lovely person. We shall forever remember her kindness, cleverness and charms.

Helena served CIAT for many years in a senior role and has undoubtedly helped shape CIAT both in Hong Kong and in the UK.

Helena with CC Cho MCIAT

Tributes

I will always remember her warm, friendly and smiling person who always made me, along with many others in the CIAT family, welcome in Hong Kong. Her visits to the UK for the Institute were important and she always brought gifts to show her appreciation. A sad loss.
Professor Sam Allwinkle PPBIAT MCIAT

We will fondly remember Helena as a friend who was so welcoming both on trips to Hong Kong and when she came to the AGM Weekends. I am sure her family and friends will all miss her greatly and we are grateful to have known her as a good friend.
Mark Kennett PPCIAT MCIAT CEnv
CIAT-Accredited Conservationist

Helena served CIAT for many years in a senior role and has undoubtedly helped shape CIAT both in Hong Kong and in the UK.
Simon Gallagher MCIAT, Hong Kong Centre Chair

OBITUARY

Tom Lilley HonMCIAT

03/07/1927-29/09/2019

Words by Rob Lilley

CIAT was saddened to lose its very first Honorary member with the death of Tom Lilley. Tom was awarded Honorary membership on 15 October 1977.

Edgar Jones CSAAT (left) presents Honorary membership to Tom

Tom was born in Croydon and his father was employed by construction company Costain and hence his lifelong interest in buildings and architecture began during childhood days. Immediately prior to the outbreak of war, he was on holiday with the family on the Isle of Man not returning to London until the risk of bombing had subsided but without the important school certificate required to study architecture. He spent a short spell in the navy towards the end of the war and secretly enlisted at the age of 17 and served at shore bases learning how to maintain Cossor radar sets.

At the end of the war, with high demand for those with the necessary skills in design, building and development he was discharged quickly and worked hard to gain his school certificate by completing a Wolsey College correspondence course in the evenings whilst working as a junior in an architect's office in Oxford. Whilst there he met a young hospital nurse who subsequently became his wife. He also studied electrical and electronic engineering at Willesden Technical College as part of the progression towards architectural qualification.

He was subsequently employed by the Borough of Willesden, and then by Watford Borough Council, during which time he lectured in building and construction during the evenings at Watford Technical College. He later joined Hemel Hempstead Development Corporation in the architect's office assisting with shaping the, then, recently designated new town. A period in private practice followed during which, in partnership with another architect, he created a small development of Scandinavian inspired houses in the town one of which became the family home.

His primary interest later became education however and he was proud to be involved in the establishment of the new Hertfordshire College of Building (initially based in a block at the College of Further Education site in St Albans) where he became head of the Technical and Professional Studies Department. With the increasing need for skilled tradesmen and professionals, a brand new college building, with facilities covering all of the building and allied trades and skills was constructed on an adjacent site attracting students from the county, country and abroad. The reputation of this specialist college soon became evident.

He became a moderator of marked examination scripts for certificates and diplomas in building and architecture and there were frequent recorded deliveries of thick brown envelopes marked On Her Majesty's Service for his attention.

He was an active member of several professional bodies including the RIBA, CIOB and the newly formed (then) Society of Architectural and Associated Technicians. He held those responsible for confirming that architect's dreams could be realised with new materials and techniques in high regard and was extremely proud to be made the first Honorary member of the organisation.

After a number of years at the College of Building he was approached by Her Majesty's Inspectorate of Schools to become an inspector specialising in further education, particularly architecture, building, design and related subjects.

This was an activity he found extremely enjoyable meeting new colleagues and travelling all over the country visiting colleges and training centres. He was disappointed to retire and disturbed to see the inspection regime alter considerably what was to become OFSTED subsequently began to take shape.

Tribute

I remember Tom Lilley and his award of Honorary membership. He supported the notion of Architectural Technology as a separate but complementary function within architecture and his influence within education, particularly with policy makers and funding agencies, gave birth to separate qualifications in Architectural Technology at HNC and HND level.
He was an important ally and champion during the formative years of SAAT for Architectural Technology education relating to standards underpinning our qualifications.
Professor Sam Allwinkle PPBIAT MCIAT

Membership news

Chartered Members

We would like to congratulate the following members who successfully attended their Professional Interview and have attained Chartered Membership, MCIAT:

033400	David Coyle	Northern,01
033405	Sarah Shaw	Northern, 01
026691	Jose Antinolo Perez	Yorkshire, 02
019718	John O'Neill	Yorkshire, 02
029676	Paul Tinsley	Yorkshire, 02
030626	Benjamin Clarke	North West, 03
030307	Thomas Giddings	North West, 03
029614	Samuel Golding	North West, 03
027850	Samuel Milne	North West, 03
033453	Dawn Ogden	North West, 03
027331	Mohammed Shabuo	North West, 03
023291	Alexander Gray	East Midlands, 04
024437	Luke Clark	West Midlands, 05
034209	Andrea Watts	West Midlands, 05
034263	Ricky Tomlinson	Wessex, 06
031371	Michael Carman	East Anglia, 07
033466	Shane Hills	East Anglia, 07
028885	Michael Mckay	East Anglia, 07
019613	Brandon Schmidt	East Anglia, 07
016916	Grahame Merson	Central, 08
025575	Lalit Chauhan	Greater London, 09
031358	Kevin Davis	South East, 10
033364	Gillian Mullen	South East, 10
020945	Richard Philpott	South East, 10
022451	Matthew Farley	Western, 12
012710	Ian Churcher	Scotland West, 13
021329	Fraser Hunter	Scotland East, 14
025629	Colin O'Neill	Scotland East, 14
033081	Steven Denton	Wales, 16
026088	Theodore Speaks	Wales, 16
026989	LAI Po Lung	Hong Kong, C1
033100	Karen Byrne	Republic of Ireland, C2
028288	Cian Gilligan	Republic of Ireland, C2
016092	Ben Morris	Australasia, C3

Welcome back
We would like to welcome back the following Chartered Members:

022320	Ross Walker	East Midlands, 04

In memoriam
We regret to announce the death of the following members:

011871	Ian Carey	North West, 03
020001	Tom Lilley	Central, 08
002294	Kenneth Rice	Central, 08
003175	John Washington	Central, 08
002153	Clive Jones	Greater London, 09
004308	John Clenshaw	South East, 10
007393	Robert Sheppard	South East, 10
012571	LEE Chui Lin Helena	Hong Kong, C1

Conduct

Member 024175 – Timothy Duffie
Mr Duffie was found in breach of Clause 1g), Clause 3b)ii) and Clause 8c) from the Code of Conduct effective 1 May 2014:

Clause 1: Professional Conduct
The members shall at all times
g) describe themselves factually and/or in good faith.

Clause 3: Practice Registration
b) Chartered Members and profile candidates acting as principals shall:
ii) comply with the "Requirements for CIAT Registered Practices" as published by the Institute from time to time.

Clause 8: Breaches of this Code
The members shall:
c) when subject to an investigation by the Institute of an alleged breach of this Code use their best endeavours to assist in that investigation at their own cost.

Disciplinary action:
In accordance with the Conduct & Disciplinary Procedures Item 18c), Schedule of Disciplinary Action, the Conduct Committee has determined that Mr Duffie was to be excluded from the Institute for a period of three years in respect of the breach of Clause 1g) from the Code of Conduct effective 1 May 2014.

In accordance with the Conduct & Disciplinary Procedures Item 18c), Schedule of Disciplinary Action, the Conduct Committee has determined that Mr Duffie was to be excluded from the Institute for a period of one year in respect of the breach of Clause 3b)ii) from the Code of Conduct effective 1 May 2014.

In accordance with the Conduct & Disciplinary Procedures Item 18b), Schedule of Disciplinary Action, the Conduct Committee has determined that Mr Duffie was to be reprimanded and required to give an undertaking in writing to refrain from further contraventions of the Code of Conduct in respect of the breach of Clause 8c) from the Code of Conduct effective 1 May 2014. Mr Duffie has not provided his letter of undertaking as requested.

The two periods of exclusion are to run concurrently, and therefore the total period of exclusion from the Institute is three years.

AT CPD Register Directory

For full details please visit ciat.org.uk/education/cpd/cpd-register.html

CDM

Introduction to the Principal Designer Role
This one-day, interactive, introductory course will equip delegates with the knowledge and understanding to undertake the new CDM2015 Principal Designer role on small and medium sized projects.

Cost/fee for attendance: £150.00
Contact: James Ritchie
E: james@jamesritchie.com
T: 07785915687
jracdm.com

BIM

BIM Level 2 Essentials
This online course aims to equip participants with BIM best practice, which when adopted leads towards efficient delivery, driving excellence, preventing accidents and saving time and money – both now and in future years.

Cost/fee for attendance: £170
bre.ac

BIM Level 2 for Information Managers
This online course is the second stage of the BRE Academy's BIM series. Successful completion of the course qualifies delegates to apply for BIM Certification for Individuals with BRE Global.

The course leads to a practical working understanding of the management of information within the BIM Level 2 process. Having completed this course, delegates will have a practical understanding of BIM management, standards, methods and procedures, and a deeper understanding of the BIM environment.

Cost/fee for attendance: £250.75
bre.ac

BIM Strategy and Concepts (ACM015) and BIM Application (ACM016)
Learning will take place through the Robert Gordon University virtual campus with a mix of online lectures, tutorials and self-guided study. Each topic within the module will have a number of self-required and obligatory activities aimed at emphasising the learning.

Cost/fee for attendance: £600 per module
Contact: Professor Richard Laing
E: r.laing@rgu.ac.uk **T:** 01224 263716
rgu.ac.uk/bim

Global BIM Management
The Global BIM Management Certification Program prepares participants to lead a new business paradigm in the AECO industry.

Cost/fee: €14,500
Contact: Maria Domingo, Product Manager
E: maria.domingo@e-zigurat.com
T: 0034 686 806 623
e-zigurat.com

How Virtual Reality saves time and resources (VR for Architecture)
To demonstrate how the sensation of actually being inside a building makes VR a powerful and money saving tool for communicating design intent.

Cost/fee for attendance: a nominal fee of £10 for the VR viewer
Contact: Scott Berry
E: scott.berry@applecoredesigns.co.uk
T: 0121 447 7788
applecoredesigns.co.uk

Building Regulations

Reducing the Performance Gap Through Fabric First
The presentation will improve understanding and confidence regarding insulation and how it is used; how its performance is measured; the role of the designer/specifier in ensuring that manufacturers provide accurate U-value calculations and condensation risk analyses; and where insulation works with airtightness and thermal bridging details to contribute to a 'fabric first' approach.

U-value Calculations and Condensation Risk
This presentation will improve understanding and confidence regarding insulation and how it is used; how its performance is measured; the role of the designer/specifier in ensuring that manufacturers provide accurate U-value calculations and condensation risk analyses; and where insulation works with airtightness and thermal bridging details to contribute to a 'fabric first' approach.

Cost/fee for attendance: free to groups/practices
Contact: Lee Buckley
E: buckley.lee@recticel.com
T: 01782 590470
recticelinsulation.co.uk

Rainscreen Cladding: Compliance with BR135
Topic areas for this CPD course include Rainscreen Cladding, BR135 and Fire Performance of External Thermal Insulation for Walls of Multistorey Buildings.

Part L1A 2013 – Fabric Performance and Towards Passive, NZEB Targets
Topic areas for this CPD course include Building Regulations – Part L1A 2013 targets and corresponding specifications, Thermal Bridging and Airtightness Targets.

Section 6 2015 Scotland – Fabric Performance and Towards Passive
CPD topic areas include Building Regulations – Section 6 2015, Thermal Bridging and Towards NZEB/Zero Carbon House/Passive Standards.

Conventions for U-value Calculations – In accordance with BR443
Topic areas for this CPD course include Standards for U-values Calculations, Fabric Performance, Thermal Measurement and BR 443 Conventions.

Contact: Mary Maguire
E: marketing@xtratherm.com
T: +353 46 9066079
xtratherm.com

Fire

Fire Modelling for Fire Investigation and the Design of Buildings
Fire modelling is used primarily to predict the speed of smoke and heat from fires. BRE pioneered the original development and application of computational fluid dynamics (CFD) to create fire models that can when expertly used, be powerful design and safety tools.

Cost/fee for attendance: £42
bre.ac/course/fire-modelling-for-fire-investigation-and-the-design-of-buildings

Fire Stopping and Compartmentation
Compartmentation is an essential part of fire safety design as it subdivides a building into areas of manageable risk, to provide adequate means of escape, and to provide fire separation for adjoining buildings.

Cost/fee for attendance: £250
bre.ac/course/fire-stopping-and-compartmentation

Property Protection and Business Resilience: Automatic Sprinklers
This presentation will provide recipients with an awareness of the beneficial impact that incorporating sprinklers can have and how they can add value to building design. It also looks at the impact of fire on businesses and how sprinklers can aid the design process.

Cost/fee for attendance: free
Contact: David Ing
E: david.ing@wearefabrick.com
T: 0162 275 4295

Other

Biophilic Office Design
This online course is a webinar hosted by Flavie Lowres, BRE Sustainable Products Associate Director, who will illustrate the concept and main techniques that will be used in this exciting research project.

Cost/fee for attendance: £10.50
bre.ac/course/biophilic-office/

BREEAM Associate
This BRE Academy course has been designed to help understand, in depth, the essence of what BREEAM is about, what it involves, and how to successfully support the BREEAM process day to day.

Cost/fee for attendance: £195
breeam.com

In the Beginning: It all Starts with a Raised Access Floor
This CPD takes place in the form of a presentation, alongside the showcasing of product samples and equipment for a hands on approach, usually within a practice over a lunchtime period.

Bathgate Flooring can also offer the presentation from either of their 2 offices in Hereford and Warrington, with Hereford offering a factory tour of the manufacturing process.

Cost/fee for attendance: Free of charge
Contact: Darrin Andrews
E: d.andrews@bathgateflooring.co.uk
T: 07800 748930
bathgateflooring.co.uk

Loft insulation isn't working – what can we do about it?
A one-hour online CPD module by LoftZone will explain the 'in-use factors' that limit the effectiveness of loft insulation; the research by the National Physical Laboratory and Carbon Trust that show how widespread these factors are; traditional insulation and building methods which are no longer appropriate; alternative techniques to maximise insulation performance; specific design considerations and a U-value calculator and safety requirements in lofts.

Cost/fee for attendance: free
Contact: Dave Raval
E: cpd@loftzone.com **T:** 01483 600304
loftzone.co.uk

Controlling Buildings Digitally
This CPD seminar will demonstrate how the correct deployment of a digital system can dramatically enhance the overall end user experience, or how a building manager can get better control over energy usage.

Cost/fee for attendance: £40 per person
Contact: Stuart Hanlon
E: training@mdar.co.uk **T:** 0120 2798 897
mdar.co.uk

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