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0161 233 4497

Editor
Adam Endacott
editor@ciat.org.uk
+44(0)20 7278 2206
Advertising
Kenneth Ashcroft
ciat@darkhorsedesign.co.uk
+44(0)20 7323 1931
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

Design
Darkhorse Design
ciat@darkhorsedesign.co.uk
+44(0)20 7323 1931

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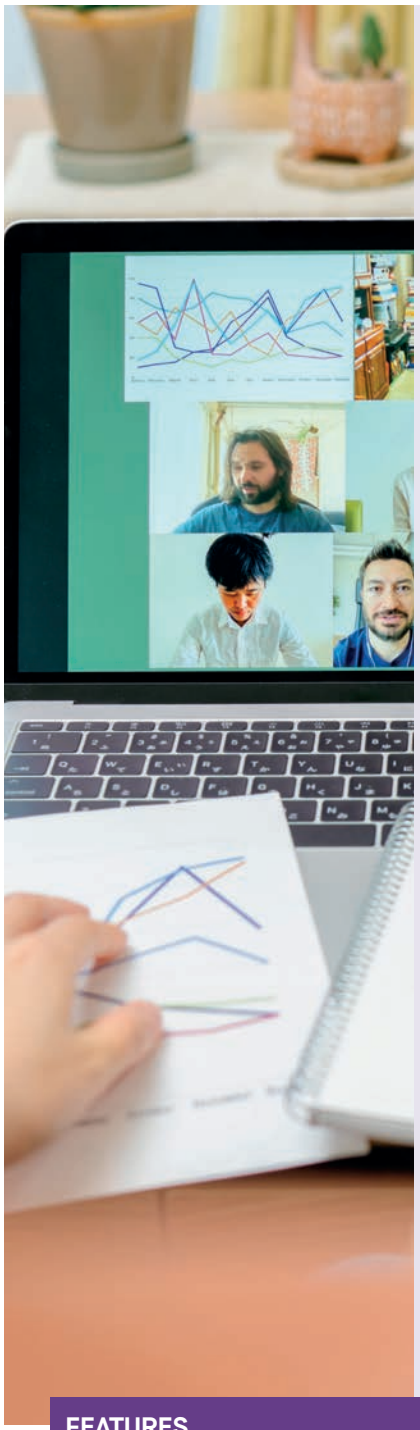

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COVID-19

Hello everyone

Welcome to the summer issue of *AT Journal* which has been delayed slightly so we can bring you the latest updates and the *Code of Conduct* (as an insert).

Since March, we have been living in unprecedented times which has affected us all in many ways – at home, in business and socially. What has not changed is our fabulous Architectural Technology community which continues to deliver and support each other.

I have seen this first hand with my 'virtual tour' of the Regions and Centres – meeting with members has been an incredible and poignant time for me as I find out how COVID-19 is affecting you directly. I have also been able to find out how we as your professional Institute can support you further in your working lives and ensure that we remain a solid fountain for you to lean upon and gain advice and knowledge. Please keep an eye out for when I will be visiting your Region or Centre in your inbox or via our social media channels.

As part of our support we have developed a COVID-19 section of the website which is updated daily with all the latest information and news to assist you and guide you to documents and best ways of working. Where possible this supports all members based in all nations. Please do visit this resource which can be found here: ciat.org.uk/covid-19.html

In this issue, we have some useful articles about risk assessments, insurance, planning and working remotely which I hope will be helpful.

As mentioned, also included as an insert is the new *Code of Conduct* which will be effective from 1 September 2020. There are some significant changes to the Code with the introduction of affiliate status so it is important that you familiarise yourself with this to ensure you remain compliant. Due to changes in project focuses by the Institute as a result of COVID-19 and also impact to you as members, the implementation date of the *Code* was changed to 1 September 2020.

Over the next year, we will be communicating how the new joining structure will work and be brought in, the transitional timetable for change and there will be FAQs on the website answer your questions. If your Journal is missing the insert then please email communications@ciat.org.uk and we will ensure you receive a copy or visit the website to download a copy for your records.

These times have also demonstrated how important equality, diversity and inclusivity is within our society. As part of my inaugural Presidential speech in November I spoke about the importance of this work and earlier in the year I set-up the Institute's Equality, Diversity and Inclusion Taskforce, which was put on hold with COVID-19.

The aims of the Taskforce are to:

- Define equality, diversity and inclusion
- Guide CIAT on its commitment statement
- Update the current Equality, Diversity and Inclusion Policy
- Create and develop an Equality, Diversity and Inclusion Strategy
- Set aims and how they can be achieved such as equality monitoring and learning and development for the membership.
- Prioritise collecting and using good quality people data to identify barriers and solutions.
- Regularly audit, review and evaluate progress, using quantitative and qualitative data on both diversity and inclusion, to highlight where barriers exist and show the impact of initiatives, making appropriate changes to activities if needed.
- Benchmark progress against other organisations and explore what others are doing to adopt and adapt ideas where appropriate.
- Network with others from inside and outside the organisation to keep up-to-date and to share learning.

I am now inviting members to put themselves forward to join this Taskforce in a voluntary capacity which will meet virtually. If you would like to be a part of this Taskforce or to find out more then please contact Adam Endacott, Communications Director, adam@ciat.org.uk

I trust that you remain safe and well and if you would like to contact me directly about anything then please do email me at president@ciat.org.uk

With best wishes

Eddie Weir PCIAT
President

COVID-19

How the pandemic could change our homes forever

Words by Dr Tara Hipwood, Lecturer in Architecture at Northumbria University

Since the beginning of the COVID-19 pandemic, our homes have been serving as makeshift workplaces, schools, gyms and pubs - many of us are spending more time in them than ever before!

People often choose to buy or rent their particular home because of its location – perhaps it offers access to good schools or an easy commute to work by car or public transport. This means people often invest in more expensive homes in locations with access to quality facilities and then adapt them to accommodate the activities of their daily lives.

As an architect and researcher in housing and sustainability, my research examines adaptations ranging from extensions and loft conversions, through to the installation of renewable technologies and retrofits. Many homeowners view their homes in desirable areas as a financial asset they plan later to cash in. For this reason, renewable and energy efficiency measures are often not included in adaptations, due to uncertainties about how these will be valued when they come to sell. With fewer people now commuting and more people working from home, where people choose to live and how they want their houses to function may change after this prolonged period of lockdown.

An increase in the number of homeworkers could see a wider preoccupation with thermal comfort and the energy efficiency of their homes.

There have already been suggestions that people may want to escape city life and move to the countryside, with many longing for more space and better access to nature.

Goodbye open plan living?

It is likely that for many families, this period has also highlighted that when they are all in the house at the same time, it can be hard to find any personal space. A popular trend in recent years has been for open plan living. This often involves opening up several ground floor rooms to create a single, open plan, multi-functional space. These open plan areas usually function on the premise that any homeworking parents can occupy this space during the day, before the family comes together to socialise in it in the evening.

This, however, relies on a 'phased' pattern of occupation, whereby different members of the household occupy the home at different times of day. This is very different from the 'concurrent' pattern of occupation – whereby all members of the household occupy the home simultaneously – that lockdown has made more prevalent.

Being able to supervise children while working may be beneficial for some. But for others, the lack of privacy afforded by these large, open plan spaces has no doubt presented challenges. Particularly when, for example, you might want a quiet corner in which to hold online calls. Self-isolating is also more difficult in such spaces, as is quarantining objects coming into the home.

Changing housing desires

It is likely that changes in commuting or work habits could also prompt a fundamental shift in what people perceive as priority features in the home.

People who regularly work from home use their heating far more to maintain a comfortable working environment. An increase in the number of homeworkers could see a wider preoccupation with thermal comfort and the energy efficiency of their homes.

Homeworking could also bring many of the environmental considerations associated with workplace productivity, such as indoor air quality, noise pollution, and visual comfort, to bear on the domestic environment. This may lead homeowners to invest in measures such as triple-glazing or high-performance windows, increased insulation and draught-proofing – which would also lead to reduced CO_2 emissions.

Natural light and self-sufficiency

A growing preoccupation with exercise and health could also see more people thinking about the impact internal environments can have on our well-being – prioritising natural light and access to nature. This could lead to reduced reliance on electrical lighting and greater demand for gardens that encourage biodiversity.

Food shortages in supermarkets at the beginning of lockdown have also resulted in a renewed interest in self-sufficiency, which may continue long after lockdown. This could lead to gardens being used for growing food, which would ultimately lead to a reduction in food miles. This could even lead to more people becoming interested in producing their own energy at home using solar panels or other renewables.

There could also be increased demand for new housing, particularly where the design of new housing responds to the new realities of home schooling and working, as well as a healthier, more self-sufficient lifestyle.

The experience of lockdown will, no doubt, have a lasting effect on us all. Many will be rethinking the kind of life they want to live post-pandemic, along with the role their homes could play in this. ■

This article was originally written for The Conversation.

COVID-19

Risk assessments for site visits and subsequent impacts on contracts

Words by Andrew Macleod, Partner, DWF and Harry Pangli BA (Hons) BSc (Hons) MCIAT, Chartered Architectural Technologist

During the COVID-19 pandemic, the Government indicated that essential building works should continue. The Government and Construction Leadership Council ("CLC") have introduced procedures to safeguard workers whilst construction sites remain open.

The guidance from Government on works continuing on construction sites is clear and states:

"Construction sites have not been asked to close, so work can continue if it is done safely" [1]

"The Government had advised that wherever possible, people should work at home. However, we know that for many people working in construction their job requires them to travel to their place of work, and they can continue to do so. This is consistent with the Chief Medical Officer's advice" [2]

"To help ensure that it is safe for you to operate in your workplace, the industry has worded to develop Site Operating Procedures (SOP), which were published by the Construction Leadership Council. These align with the latest guidance from Public Health England. As this health guidance updates, the SOP will reflect any changes." [2]

Members might be under pressure to attend construction sites and buildings that are not considered a 'construction site' to carry out their role. Members should determine if attending a site visit in person could be undertaken safely and within the guidance provided by the Government and CLC.

It is important that the Management of Health & Safety at Work Regulations (The Health and Safety at Work Act) and Construction (Design and Management) Regulations 2015 ("CDM") are also considered when determining the risks involved when visiting site.

The CDM Regulations require the Principal Contractor to plan, manage and monitor the construction phase, co-ordinating matters relating to health and safety. The works on site should be carried out without risks to health and safety, where reasonably practicable. The Site Operating Procedure will provide necessary guidance to the Principal Contractor.

Each construction site and site visit will present its own challenges in managing the risks identified by the Government concerning COVID-19. Whilst these are easing, it is incumbent upon everyone to remain vigilant. Members should consider the risks on a case by case basis and ensure that the contractor/building owner or occupier has made the arrangements to ensure that the correct measures have been taken prior to any site visit.

The purpose for the site visit should be assessed to determine if it is essential. Depending on the purpose of the site visit, alternative methods which could be adopted to avoid a physical site presence should be considered. For example:

1. Is it **essential** to carry out a site visit at this moment in time?
2. Can the site visit be attended remotely?
3. Can the site visit be carried out safely whilst adhering to the Government's and CLC guidance?

'Site visits are not always to building sites and some visits might be closer interactions with the general public. The member needs to determine the risk and manage the visit prior to attending to ensure that the Government guidance can be achieved'

To assist members in determining their risks in carrying out site visits; some considerations are provided below:

1. Site visit to construction sites. The contractor has possession of the construction site and those on site are generally separated from the general public.
   a. These sites must follow the guidance released by CLC. CLC Site Operating Procedure. Members should liaise with the site manager to ensure that the guidance provided by CLC is being adhered to. It is also an opportunity for the site manager to raise any changes, adaptation or areas of the site where the guidance could not be

implemented. The member should then carry out their own risk assessment to determine if they can carry out their site visit safely.

2. Site visits to buildings/sites that are not under the possession of a contractor.
   a. The member needs to determine and agree with the building owner/occupier if the visit is essential and discuss how the visit could be achieved whilst adhering to the Government's guidance.
   b. The member should consider the following questions prior to visiting a building/site to determine if it is safe to do so. This list is an example of considerations and members should make reasonable judgements to safeguard themselves and others from Covid-19.
      i. Is the site visit/work essential?
      ii. Can the site visit be undertaken remotely?
      iii. Is the proposed site visit to a home or place of work?
      iv. Will the site visit require access into the building?
      v. Are there any self-isolating persons within the building?
      vi. Is there safe access and will the correct precautions be undertaken to provide safe access?
      vii. Can social distancing be achieved in the building?
      viii. Agreeing travel arrangements. Is car parking required?
      ix. Agreeing a strategy in undertaking any works on site to ensure that the Government guidance is achieved.
      x. Members having the correct PPE to cover the tasks to be undertaken during the visit and carrying out a risk assessment to determine if additional PPE is required to protect against Covid-19. If the member has no equipment and none can be provided, then can the site visit be undertaken safely.
      xi. Anyone scheduled to attend the site visit that has developed COVID-19 symptoms must not attend site. Agreeing that members' attendance will be cancelled if they develop symptoms.

Updates to the Government guidance and CLC will continue to change and evolve and members should keep updated. Members should also consider the impact to their appointment and contract in not attending site if the site visit cannot be undertaken safely.

Impact on appointments and contractual obligations

Where members cannot attend site safely and other options such as remote access have been considered and ruled out, members will need to review the terms of their own appointments for options. This would include rights to suspend services and force majeure (see further below). It is advisable to engage pragmatically with clients to try to reach a reasonable agreement about how the situation can be managed most effectively without causing hardship for any one party.

Such circumstances may suggest construction works are not capable of operating safely within the terms of the CLC Site Operating Procedures for construction sites. Each project and site will need to be reviewed individually. Employers and contractors will need to consider their options under the terms of the building contract.

Each building contract must be considered on a case by case basis, but the following points are likely to be relevant for contracts that commenced before COVID-19 was widely known:

1. Events that permit extensions of time to the completion date – building contracts usually permit extensions of time due to a force majeure event. If so, the question is whether the clause applies in light of the current circumstances and if so, the impact on other contract terms such as the contractor's entitlement to loss and expense. Members performing the role of contract administrator faced with an application for an extension of time on these grounds should consider whether the clause specifically refers to a ''pandemic". If so, the position is likely to be clear as the World Health Organization has declared COVID-19 a pandemic. Whether a force majeure clause has been triggered by a particular event will depend on the interpretation of the words that have been used within the clause and how the current events apply to this interpretation. If there is no contractual definition of force majeure, the position is uncertain. Force majeure is generally understood to cover circumstances that are not within a contracting party's control. This will have to be very carefully assessed in the context of the Government's view that construction sites should continue to operate provided that they can follow Public Health England guidance and have suitable measures in place to minimise the risk of COVID-19 spreading and against any contractual requirements to take steps to mitigate the effects of events that may cause delay. Service of relevant notices under contracts will need to be adhered to and contractors will still need to demonstrate that delay has been caused and in what way.

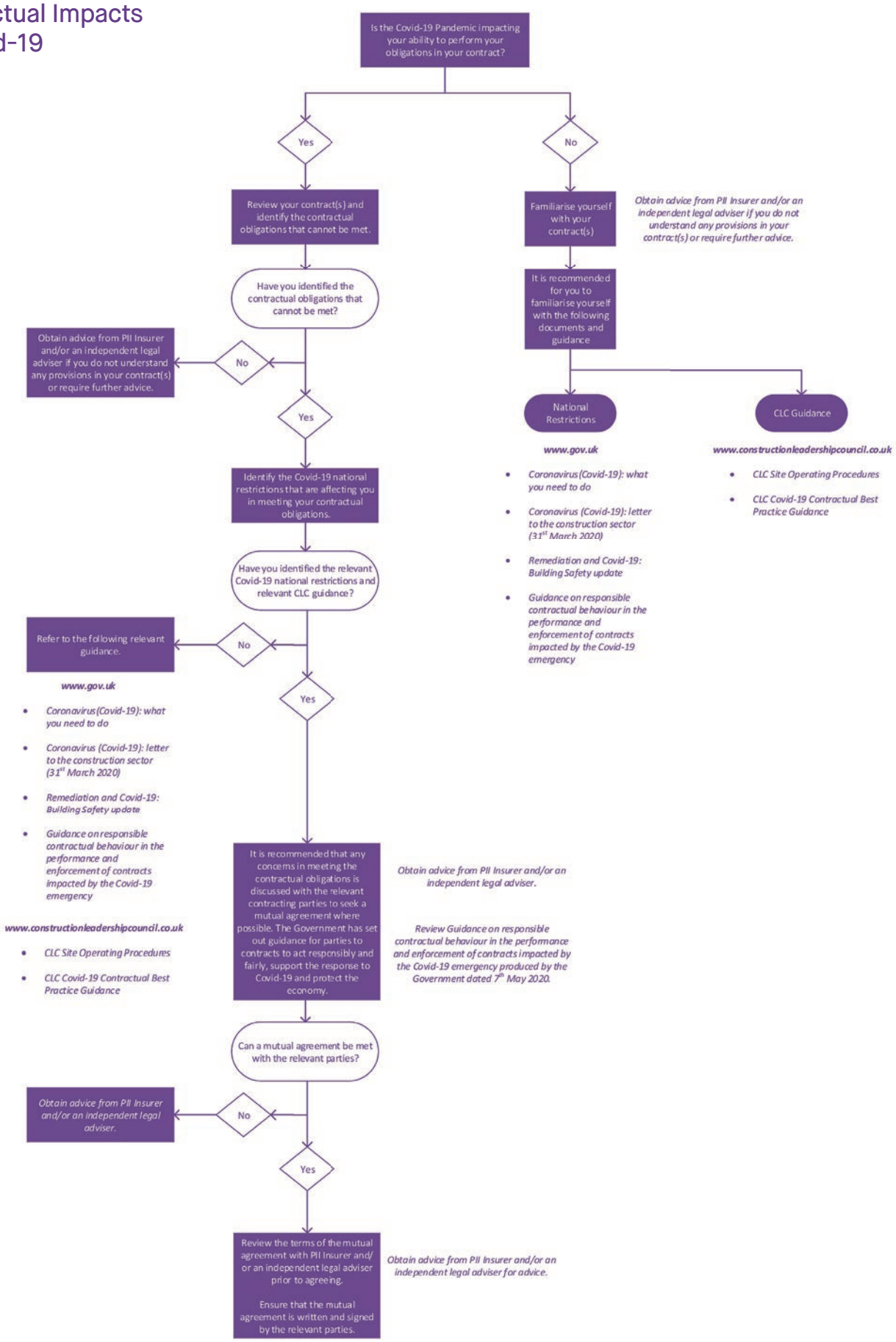
Each project and site will need to be reviewed individually.

2. Employer's right to postpone the works – the building contract may permit an employer to instruct the postponement of the works. This is a matter for the employer and will involve consideration of the impact on other contract terms such as the contractor's entitlement to loss and expense.
3. Contractual rights to suspend performance should be checked. Under an unamended JCT, if a force majeure event goes on for longer than 2 months there is a mutual right of termination. The parties still have the option though to agree to extend this period.
4. Contractor's right to loss and expense – no right to loss and expense would generally flow from a force majeure event but would generally flow from an employer instruction to postpone. Again, each contract should be considered on a case by case basis. Parties may however, try to reach a commercial agreement to manage the current situation in both of their interests. This is a fast-moving situation where guidance is changing rapidly. The views above are subject to change and members should take appropriate legal advice to assist their decision making. ■

[1] For access to the latest Government advice, please explore gov.uk/coronavirus
[2] For the most recent CLC Operational Procedures (at the time of publication) please visit: constructionleadershipcouncil.co.uk/news/site-operating-procedures-version-4-published/

COVID-19

Contractual Impacts of Covid-19



COVID-19

How it affected planning permission in the Republic of Ireland

Q&A with Michael O'Keeffe BSc(Hons) MCIAT, Chartered Architectural Technologist, Director, healycornelius design ltd

In response to the COVID-19 pandemic, the Minister for Housing, Planning and Local Government issued an Order on March 25 which has affected applications for planning permission in the Republic of Ireland. The Order resulted in extensions of time for a range of specified/appropriate periods and timelines under the Planning and Development Act 2000 (as amended).

This Order took effect from 29 March and was due to end on 20 April. The measures were subsequently extended until Saturday 9 May, and again further extended until Saturday 23 May 2020 inclusive, comprising a total period of eight weeks (56 days).

...up to sixteen weeks in total, to determine a planning application.

What did this mean?
A planning authority had the normal period of eight weeks, together with an additional period of up to eight weeks i.e. up to sixteen weeks in total, to determine a planning application.

Could planning applications be submitted during this period?
Yes, local authorities continued to register, validate, and upload new applications as resources allowed but were generally not processed beyond that.

What happens if a planning application was lodged prior to 29 March?
This depends on the portion, or number of days of the eight-week statutory planning time period, that remained on the coming into effect of the Order on 29 March 2020. For such planning applications, up to eight additional weeks (56 days) may be applied to planning due dates that were applicable prior to 29 March.

In each case, the exact calculation of the statutory time period for determination will depend on the date the planning application was submitted. For example, a planning application submitted on Friday 27 March 2020, must now be determined by Thursday 16 July 2020.

Did the emergency legislation affect other planning processes?
Yes, the extended time periods also applied to development plans, planning enforcement and planning appeals (An Bord Pleanála).

When were the restrictive measures lifted and what does the resumption of statutory timelines mean for determination of planning applications?
From Sunday 24 May 2020, the planning authority have the normal statutory planning period of eight weeks, to determine (a) any planning application made during the period of duration of the Order, i.e. from 29 March 2020 to 23 May 2020 inclusive, and (b) any planning application made on or after Sunday 24 May 2020.

How do the resumption of statutory timelines effect public participation in the planning process?
From Sunday 24 May 2020, any interested person has the normal statutory planning period of five weeks, to make a submission or observation on (a) any planning application made during the period of duration of the Order i.e. from 29 March 2020 to 23 May 2020 inclusive, and (b) any planning application made on or after Sunday 24 May 2020.

This means that any planning application submitted to a planning authority after 29 March 2020 and during the period of the Order, cannot be decided by the planning authority until the five-week period for public participation on the application has been completed, and this cannot be for at least five weeks after 23 May 2020, i.e. Saturday 27 June 2020 (N.B. as the first day after 27 June 2020 is a Sunday where the office of planning authorities are closed, submissions may be made until Monday 29 June 2020 in such cases). ■

COVID-19

Business interruption cover – an update

Words by Kevin McParland, Executive Chair, CIAT Insurance Services administered by McParland Finn

As the lockdown is now slowly being eased, the first tentative steps to return to some semblance of normal life are now being taken by most people, with businesses starting to follow suit. But where does that leave those people impacted by the lockdown itself?

In a previous article, we highlighted that the position regarding coverage for claims relating to COVID-19 was likely to be more complicated than was suggested by the Government and, unfortunately, this has proven to be the case.

In the majority of cases, for the business interruption aspect of the policy to trigger, it is usually a requirement that damage has occurred at or within the vicinity of your office. While COVID-19 has had an impact on the way we approach everyday life, it has not resulted in any damage to any premises. As a result, it was our view that it may be possible to argue that cover may be provided as a result of the 'Denial of Access' cover, which would cover claims for

"... **your** inability to use the **office** due to restrictions imposed by a public authority during the **period of insurance following**:

b. an occurrence of a **notifiable human disease**...

In reviewing the policy wording, a number of claims have been referred to insurers to test the position under the policy, and we have now had a response which provides an indication as to the stance being taken by insurers. Unfortunately, their comments were not positive and while we anticipate that these claims will ultimately result in some form of litigation, we believe it is important to set out the overall position and our views in response.

The position currently being taken by insurers can be boiled down into the following arguments:

1. The inability to use the office must have resulted in the business stopping, if you have the ability to work from home then the business has not been interrupted.
2. The public authority must have 'imposed', which they construe to mean ordered by a force of law, an order to close the office. The Government recommendation that the business should work from home is not sufficient.

3. The occurrence of a notifiable human disease must be specific to your office, the steps being taken to deal with a global pandemic do not fall within the cover provided.
4. The losses must arise 'solely and directly' as a result of the inability to use the office. If the cause of the loss is concurrently caused by something else (i.e. projects are cancelled as a result of the pandemic), the cover does not trigger.

While there is clearly some argument to the fact that insurers are attempting to extend the definition of 'occurrence' beyond the general understanding of the word, the remaining arguments will have an impact on the coverage position.

Where does that leave my claim?

At this stage, we would continue to hold the view that any additional equipment purchased to ensure that the business can continue to trade with minimal disruption amounts to an increased cost of working. We do not accept the suggestion that any costs incurred in safeguarding the company's ability to trade effectively removes any cover for those costs. This would appear to run contrary to the purpose of the policy.

However, the position becomes more complicated when considering whether or not a public authority has ordered the closure of the office and whether or not the losses arise 'solely and directly' as a result of that closure.

As matters currently stand, as the Government's advice was for the majority of companies to 'work from home where possible', there has been no order to close the office, While we would argue that decisions to ensure that staff could remain at home safeguard both the employees and the company, it is difficult to argue against the fact that there was no order imposed by the Government to close the office.

Sadly, if there is no order to close the office then there can be no losses that arise 'solely and directly' as a result of the closure.

Even if the views of the Government guidance could be deemed to be an order to close, if the loss can only be considered if it solely and directly as a result of the closure, the losses that could be claimed are extremely limited. By way of examples:

Rent, rates and utilities – a number of claims have been submitted in relation to ongoing expenses being incurred while away from the office. However, these are arguably contractual payments that would have arisen in any event. They have not been incurred solely and directly as a result of the inability to use the office.

Loss of income – clients are cancelling or delaying projects, resulting in a loss of income. These are the decisions of the client as a result of the economic uncertainty and the pandemic, they do not arise solely and directly from the closure of your office.

What happens now?

A number of challenges are being made to the stance being taken by insurers in regards to their response to the pandemic and it is likely to be some time before the position is fully resolved. But, given that insurance cover for a pandemic was never in the mind of insurers nor was it a factor considered when determining the premiums, it is unlikely that their stance will alter.

It remains our view that some assistance should be provided by insurers when considering the steps taken by you to continue trading and, as such, it may still be worth making a claim for those costs. However, such claims will inevitably be rejected while the arguments continue, although we will continue to pursue matters on your behalf to the best of our abilities.

However, as a note of caution, it is important to understand that your insurance policy is a contract between you and your insurers and bound by the laws that relate to contracts and insurance generally. While it may be easy to be caught up with the rhetoric that the insurers should do the 'right' thing', they are bound by the terms of the policy, and any legal challenges made against insurers will also relate to the position under the contract. As with all such matters, the position is not as clear cut as many of the commentators would suggest.

Sadly, if there is no order to close the office then there can be no losses that arise 'solely and directly' as a result of the closure.

Given the circumstances, and the issues regarding the insurance industry's approach to the COVID-19 crisis the industry regulator, the Financial Conduct Authority, is in the process of taking a test through the Courts. This is likely to determine the approach that insurers take with the claims going forward. Again, we would caution that Courts are likely to uphold the legal position which may not necessarily be in line with what most consider 'justice', However, given that one of the guiding principles of the insurance profession is to 'treat customers fairly', and we would expect that where cover is provided under the policy the claim will be dealt with promptly.

As always, we at McParland Finn Ltd are here to assist you through the current crisis and beyond in any way we can.

If you would like to discuss this or any other matters, please do not hesitate to contact us. ■

CIAT INSURANCE SERVICES

ADMINISTERED BY MCPARLAND FINN LTD

McParland Finn Ltd, Barlow House, Minshull Street, Manchester, M1 3DZ
T: 0161 236 2532
info@m-f-l.co.uk

COVID-19

Adapting your technology to the new working normal

Words by Matt Rhodes, IT Solutions Expert, Quiss Technology

The spread of Coronavirus has prompted the Government to urge non-essential workers to stay home and introduce social distancing measures, with businesses across the UK now faced with the challenge of employees working from home for the foreseeable future.

Although it isn't a new practice, widespread remote working across all industries is unprecedented, and some businesses may not have the technology needed to facilitate collaboration and communication between colleagues in different locations.

With no confirmed date for when the crisis will pass, there's a good chance the current situation will last for weeks, becoming the new normal for many that have only ever worked at their business office.

For the survival of many businesses, it's important they adapt quickly to these new working conditions...

For the survival of many businesses, it's important they adapt quickly to these new working conditions and implement technology that allows operations to continue, without impacting or frustrating the productivity of their employees.

Popular choice

Since the social distancing measures were introduced, cloud-based platforms like Microsoft Teams have grown in popularity, as businesses acknowledge the urgency of the situation.

Whilst the platform's userbase has grown steadily since its creation, the coronavirus crisis has led to an unprecedented spike in usage, with over 44 million users – 12 million of those coming within a seven-day period in March.

According to recent figures, users generated over 900 million meeting and calling minutes within that same seven-day period, offering a valuable insight into how vital Teams has become in allowing businesses to communicate, despite the temporary restrictions.

In response to this spike, Microsoft are delivering regular updates to enhance the user experience, giving businesses the tools they need to continue operating over the coming weeks and months.

Key features

Microsoft Teams has been designed as a virtual workspace, allowing employees to communicate freely and share information efficiently, with built in features like video conferencing allowing face to face meetings, without the personal contact.

As a Microsoft product, Teams automatically integrates with your existing Office 365 programmes, like Word, Excel, PowerPoint, SharePoint and Outlook, giving you immediate access to the services you rely on most.

Featuring built in conversation channels, Teams makes it easy for colleagues to contact one another and receive quick responses, acting as a temporary replacement for the office 'hallway chat'.

These channels can be separated by topic to keep conversations organised, allowing employees to find information efficiently, which will help them maintain their productivity during a period of uncertainty. Using @ mention features, messages can be targeted to a specific person or group, streamlining the entire process.

Within these conversation channels, users can share files and documents with other participants, allowing them to receive feedback quickly and deliver work to the standards expected.

Maintaining productivity

Using Teams as a hub for communication and collaboration will enhance the productivity of your employees even though their opportunities to meet face to face have been temporarily reduced.

Whilst emails can also be used for communication and file-sharing, often the immediacy is lost in the inbox, as responses are delayed or emails end up being filtered into the junk folder unwillingly.

Microsoft Teams has been designed to feel more like an engine room rather than a tool, offering businesses a streamlined way for their employees to share work and report back to the management team.

In fact, one of the biggest advantages of Microsoft Teams is the reduced email inbox clutter, as staff adjust to using the platform for work-based queries, rather than overwhelming colleagues with a constant stream of emails.

Remote working comes in different forms, with some employees choosing to set up a home office space with a desktop computer, while others will be using laptops and tablets to carry out their daily tasks.

Fortunately, Teams can be accessed across all devices, allowing users to work using the comprehensive web interface or collaborate on the go using the customisable mobile app, meaning operations won't be impacted by employees' working environments.

Online meetings and conferences

During these unusual times, one of the most significant challenges businesses must overcome is the removal of face to face meetings, conferences and daily interactions.

Although phone calls and emails offer an alternative, neither of these have the same impact or allow for the same level of collaboration, especially if participants need to work through a document or presentation together.

Recognising the importance of these meetings in keeping track of staff progress or maintaining client relationships, Microsoft Teams has sophisticated video calls and meetings features that allow multiple participants to communicate in one call.

Once the meeting has begun and users have joined the video call, features such as 'background blur' can be activated, removing visibility of any distracting surroundings.

If employees need to go work through a document together, then the 'screen share' feature can be used to display a file to all participants in the call.

Another significant benefit of Teams meetings and conferences is the ability to record entire sessions, giving businesses a permanent record of the issues discussed, which can be helpful for updating those employees who were unable to attend.

Safety first

With businesses researching and implementing technology to accommodate remote working, there will naturally be some apprehension with regards to cyber security.

In most cases, employees will be using personal devices like mobile phones and tablets to access sensitive information and these won't necessarily have the same security measures as the office desktop computers.

However, Microsoft Teams is built with the best cyber security standards possible, including the ISO 27001 and SSAE16 SOC one and two.

With integrated mobile device management, businesses can ensure their data and fleet is kept safe, and whilst no software can prevent all phishing attempts or malware attacks, Teams is constantly updating its security capabilities.

Microsoft Teams also features two-factor authentication and encrypted data, ensuring accounts are protected and sensitive documents are safely secured in line with GDPR regulations.

Moving with the times...

The current situation means many businesses are facing an uncertain future, with no clear indication as to when social distancing measures will be relaxed, and business can return to normal.

For this reason, it's more important than ever that employers keep the wheels turning as much as possible, giving their business the best chance of weathering the storm and coming out the other side strong.

With workers currently urged to stay home, technology like Microsoft Teams will ensure that operations continue running smoothly and colleagues can keep delivering the work needed to retain clients and customers over the coming weeks and months.

Not every organisation will be used to widespread remote working, so if you need help finding an effective cloud-based solution, then it's best practice to contact a specialist team of IT experts for the necessary advice and guidance. ■

COVID-19

Mental health and wellbeing

Words by Eddie Weir PCIAT, President

When I became President last year, the world had not heard of Coronavirus or COVID-19, the changes in the last six months were unimaginable back in November. However, in my inaugural Presidential speech I said it was my aim to support some very real initiatives which add value to our industry and to give support to those who work in it. It is a fantastic and exciting industry to be involved in, the changes we can make to communities and the improvements to the lives of so many can be seen, however we must also be aware of us and ensure that our health and safety are given equal importance. The pandemic may have changed what and how we work, but it has not changed this position, it has just demonstrated the importance of looking after our mental wellbeing.

As we know everyone working in the built environment sector is duty bound to adhere with health and safety requirements to varying amounts. As designers, our duty is to assess risks and consider safety during the construction process and in the use of the building once completed. Thankfully, identifying and mitigating against potential hazards has become second nature to most across all sectors of our industry.

It is fair to say that, over the years, whilst the 'health' aspect was not exactly ignored, it was not given as much attention. Following, quite rightly, years of concentrated efforts focused on improving 'safety', it is encouraging to see the transformation and extension of the 'health' element being recognised as equally important.

Health impacts now taking a priority cover issues such as:

- the need for a considered use of materials, including strategies to safely avoid any exposure to toxins within them, which can have a short and long-term health implications. As a result of a large body of research on materials, awareness of the potential side effects of certain components is better understood and product labelling to identify risks is now in place; and
- mental health and wellbeing – over the last two decades the ways in which we work and communicate have changed exponentially. Keeping up with the pace of change is challenging, regardless of age. Whilst a lot of the new communication methods are progressive, time saving and almost magical in their immediacy, the unintended consequences of stress and anxiety that constant connectivity creates has only recently been recognised as one of the issues affecting mental health and wellbeing. In this instant access environment, unreasonable demands can be made on our time, with people expecting instant responses to problems that would take some time to consider and resolve properly.

Speed of communication does not always translate to quality of content. It takes a conscious effort to step back from the unrelenting tide of communication and make a considered assessment with balance and perspective. This can only be achieved with the added ingredient of time. This is not an easy challenge for professionals who are caught up in the middle of perceived obligations and duties. The unrelenting influx of requests and demands can itself lead to a deterioration in work life balance, which can ultimately lead to a decline in mental health.

Thankfully, the stigma attached to mental health has now diminished. It is no longer perceived as a weakness to be hidden. Recognising that there is an issue to be resolved is half of the solution, the other half is access to the very real help available through a number of support organisations.

An article was published in an earlier edition *AT Journal*, by Niall Healy MCIAT, which focused on the mental health of operatives on site, entitled 'Keeping your mind on the job' (Issue 128, winter 2018). The article examined how stress and anxiety that cause distraction can, in themselves, be the source of a safety risk; and gave

pointers to assist in recognising those going through difficult times, and how they could be helped.

More recently, as part of a collaboration between CIAT and Ulster University, a Report was published highlighting the pressures on graduate and newly qualified Architectural Technology professionals. The Report provides details on a number of tools available for individuals and employers to improve their own mental health and create a supportive environment in the workplace. Please see pages 15-16 for further information on this.

The Coronavirus pandemic, has added pressures on everyone, the importance and the very real issues impacting on practitioners (employers and employees) who are concerned about their livelihoods, and also on students or those graduating this year.

Governments have provided some support mechanisms for individuals, businesses and employees, these can be found at ciat.org.uk/covid-19.html, but not for all, for example there has been some limited support to small practices structured as limited companies where the directors are remunerated by dividend,

Fellow Member, Rob Thomas MCIAT, Vice-President Practice, is one such sole director of a one-person practice who cannot access the financial support to replace the majority of lost income. Rob has described the challenges in his practice where new enquiries have dried up and many projects have been put on hold while we go through what Rob describes as this "national crisis". It was encouraging to learn from Rob how he has been focusing his energy on his passion for cycling, where he has taken part in a 100 mile virtual race. This experience has brought Rob into a new circle of friendships which he has described as being very beneficial to both his physical and mental wellbeing.

However, the experience of being in isolation and coping with the restrictions can add to fears and anxieties that impact on mental wellbeing. The first step to breaking out of this mindset is recognising if your mental health is being affected. Together with how the future will unfold and the pace of economic recovery.

Understanding that you are not alone and making use of this instant access world in a positive way by seeking out the type of help that would suit you as an individual will help to gain perspective and look to the future with optimism and hope.

If you do have concerns over your mental health and wellbeing, there are a number of fantastic organisations who can offer free help and provide support mechanisms for individuals. For those with immediate concerns, the Architects Benevolent Society (ABS), through their partnership with Anxiety UK, can offer support, the Architects Mental Wellbeing Forum (AMWF) (see pages 17-18) along with well recognised charities such as Samaritans. For those wanting to be proactive and find out more about what can be done to improve their mental wellbeing, there are excellent resources provided on the NHS website and by organisations such as ACAS, the Mental Health Foundation, Mindwise and Rethink Mental Illness.

The first step to breaking out of this mindset is recognising if your mental health is being affected.

Worries about the future can be eroded away by some small steps that can be taken today. Talking can often be the best therapy. Verbalising a concern can help put it in perspective and help focus on a more positive future. The Construction Leadership Council have recently issued the Roadmap to Recovery which looks forward to the opportunities to 'restart, reset and reinvent' the construction industry. Perhaps this perspective, taking a positive view of where we are right now, could be a useful way to think about our own personal circumstances and how we can use this opportunity to restart, reset and reinvent our own future.

Please do not feel you are alone, should you wish further assistance or support, do contact us at info@ciat.org.uk ■

Changing attitudes towards the mental wellbeing of early career Architectural Technology professionals

Words by David Comiskey BSC (Hons) MCIAT, Chartered Architectural Technologist, University of Ulster

Architectural Technologists by nature think holistically, considering the health and wellbeing of those occupying the spaces they design. This can include investigating concepts such as biophilic design and benchmarking schemes against the WELL Building Standard. However, it is sadly ironic that the health and mental wellbeing of young or early career Architectural Technology professionals new into the industry, and often tasked with designing such spaces, is sometimes neglected. I undertook a review of literature for a new report that I have authored entitled *Changing attitudes towards the mental wellbeing of early career Architectural Technology professionals* which has identified graduates of today as being of a generation which have a high potential for mental health issues.

The report was written to help fill the void around the needs and expectations of young and early career professionals, to provide advice to employers on good practice in relation to mental wellbeing and to act as a mechanism to begin conversations with the aim of promoting a healthy and happy workforce and workplace. The area of mental wellbeing has been brought into sharp focus recently due to the levels of reported mental illness and wellbeing issues among UK students *(The Insight Network, 2019)*. The 2018 national University Mental Health Survey, which had over 37,500 responses, presented some sobering statistics:

- 33.9% had experienced a serious personal, emotional, behavioural or mental health problem for which they needed professional help.
- 21.5% had received a mental health diagnosis
- 42.8% outlined they were often or always worried
- 50.3% reported some thoughts of self-harm
- 75.6% concealed their symptoms for fear of stigmatisation

In addition, research undertaken at Ulster University identified over 50% of new entry students participating in a survey as stating they had experienced a mental health issue at some point in their life. Almost a quarter of students screened positively for a mood disorder, and over a fifth of students had an anxiety disorder (McLafferty et al. 2017). Nearly a third of students reported having suicidal thoughts, whilst almost 20% of students said that they had made a suicide plan and a similar percentage engaged in self-harm (O'Neill et al. 2018).

Focusing on the Architectural Technology discipline, its diverse nature, coupled with an acknowledgement that the design of built assets has become more complex, has meant that the Architectural Technology education sector has had to reinvent itself to produce well rounded young professionals who are competent and have a skillset which allows them to flourish in whichever area they choose to specialise. Whilst this change is exciting, it does mean that the content and delivery of Architectural Technology programmes today is very different to what would have been experienced previously, and very different to what many in industry would have experienced. As well as the core competencies of technical design and detailing, designing sustainably and with inclusivity in mind and having an awareness of relevant building control and planning

legislation, graduates are generally expected to have an understanding of:

- Building Information Modelling (BIM) authoring software, implementation processes and associated standards and protocols;
- information management platforms and their operation;
- how to interrogate the robustness of details from a building performance perspective using appropriate software platforms;
- different building typologies, materials and construction methods; and
- methods of procurement and contract management.

They are expected to be innovators, model makers, problem solvers, researchers writing with academic rigour and effective communicators. Additionally, employers are now explicitly highlighting the importance of soft skills which include resilience, adaptability, organisation, good interpersonal skills and the ability to work in a team (QS, 2020). In short, successfully completing a degree in Architectural Technology is challenging in terms of workload and the time commitment expected.

Increasingly, this academic challenge is faced alongside growing external and social pressures. Rising tuition fees, accommodation costs and general subsistence mean many need to work more hours than they study just to maintain their existence, leading to an unhealthy work/life balance which can result in stress and illness. Increasing tuition fees have made students more aware of the value of their degree, with added pressure from parents and employers to achieve a high award classification. More and more have caring responsibilities to consider outside of their studies, for parents and grandparents, this is now more prevalent than ever due to an ageing population (ONS, 2019). Many young and early career professionals juggle their academic studies with fledgling sporting careers, the time commitments of which due to increased levels of professionalism have increased exponentially in recent years. The age of social media has also brought about its own pressures to conform, as well as the endeavours to live up to the perception of 'student life' which can impact on mental health. As described in an article, "This is a generation born with a phone in their hand. Bombarded with filtered images, pretend lives... and it's 24/7, there is no day off, no relief from it." (Morris, 2020). In the architecture discipline, 33% of students responding to a survey believed they had a mental health problem, higher than the rate within the UK general population, with students studying this discipline more likely to experience mental distress when compared to the 'typical' student (Kirkpatrick, 2018 citing other studies). In summary, today's students are different to those who have gone before and are a community with complex needs. All of this can have an impact on young professionals as they move into professional roles post-graduation.

More generally, this must be considered against the backdrop of the construction sector already having a poor track record when it comes to mental health and wellbeing. Whilst there are excellent initiatives aimed at raising awareness and providing support such as Mates in Mind and the Architects' Mental Wellbeing Toolkit, there has tended to be a focus on those already established within the industry as opposed to young and early career professionals recently making the transition from the university environment.

The workload outlined, combined with the stresses of everyday student life, needs to be considered from the perspective of mental health and wellbeing as everyone has different stress holding capacities. To be clear on what is meant by mental health, The World Health Organisation define mental health as "a state of

well-being in which an individual realises his or her own abilities, can cope with the normal stresses of life, can work productively and is able to make a contribution to her or his community". The pressures faced by today's young and early career professionals, both during and after university, coupled with social and personal pressures, means that more and more are struggling to cope with the "normal stresses of life" as per the definition. This does not mean that young professionals should be treated differently in practice or given less responsibility. Rather, the guidance provided in the report is simply suggesting that there is an awareness of the importance of mental wellbeing within the workplace and a supportive culture where individuals feel they will not be stigmatised if they face such personal challenges.

This is a generation born with a phone in their hand. Bombarded with filtered images, pretend lives...and it's 24/7, there is no day off, no relief from it.

To bring about meaningful change both bottom-up and top-down approaches are required to ensure those entering the industry have an awareness of and know how to deal with mental health and wellbeing issues. Likewise, there is a responsibility on employers to nurture a supporting environment. To support this process the report presents a mindfulness PatHWAY (Promoting Health & Wellbeing Among Young & early career Architectural Technology professionals), which provides guidance and good practice examples and invites employers to reduce the stigma around mental health by implementing three of the suggested changes in their workplace practice. The suggestions are not ground-breaking; indeed, many will already be routinely undertaking such practice. The guidance provided is simply acting as a reminder of good workplace practice which should make for a happy working environment. ■

To pledge the commitment of your practice to the mindfulness PatHWAY, and have it included within the report, please register via the link in page 27 of the report or scan the QR Code provided here.

*the content of this article has been taken from the report where full references to the work cited can be found. The images included are by Chi Tsang, final year student on the Architectural Technology and Management programme at Ulster University.

Architects' Mental Wellbeing Forum – not just for architects!

Words by Adam Endacott, Editor

Ben Channon

CIAT is delighted to be supporting and working with the Architects' Mental Wellbeing Forum (AMWF) which is open to Architectural Technology professionals.

AMWF's mission is to share knowledge and learning from their own experience, as well as researching other ways to support architects' and Architectural Technology professional's mental health in the workplace...

AMWF

The forum's mission statement is a simple one: to improve mental wellbeing throughout architecture.

As part of COVID-19 and to support in protecting mental health during this time, the AMWF, co-founded by Ben Channon, Head of Wellbeing at Assael Architecture, has launched a toolkit to provide advice and mental health resources.

The Architects' Mental Wellbeing Forum was founded in late 2017 in an attempt to improve mental health within architecture. It was borne out of a belief that as an industry we could all improve our understanding of mental health, and subsequently provide better environments for the mental wellbeing of people working in architecture and extended to now include Architectural Technology. The Institute looks forward to working with the Forum with this additional resource for all members. Ben said "We're really excited to have CIAT on board and supporting the Forum. Our goal is to provide advice and resources to as many people as we can within our industry, and I hope that this helps us extend our outreach and improve mental wellbeing for even more people."

As a result of a number of factors, such as long hours and a culture of perfectionism, the Forum believes that Architectural Technology professionals and architects are particularly vulnerable to problems with their mental health. This has been illustrated by the sad but noticeable increase in mental health problems reported by students in Architects' Journal surveys in recent years.

Awareness around mental health within the profession is undoubtedly on the rise. Increasingly, a number of practices and industry leaders are beginning to contribute to the debate, reflecting on what they can do as employers and how they can help improve mental health within the sector as a whole.

AMWF's mission is to share knowledge and learning from their own experience, as well as researching other ways to support architects' and Architectural Technology professional's mental health in the workplace, with the goal of improving mental wellbeing throughout the sector. They meet quarterly to share findings and discuss new ideas for nurturing mental wellbeing.

There are a host of resources available on the AMWF website, amwf.co.uk, along with case studies and stories. We actively encourage members to visit this portal and become a part of the Forum.

Last year, they launched their primary toolkit to advise practices on how to improve mental health for their employees, and they have now released a follow-up toolkit that provides a useful collection of resources and tips on how to stay positive, resilient and in touch with others during the current crisis.

Here is an extract from the toolkit to assist members during the COVID-19 lockdown:

Staying positive

Practice mindfulness

Observe breathing, listen, pause, eat and walk mindfully, meditate daily, connect with your senses if you are trying this out for the first time, we could recommend the following:

- headspace.com
- calm.com

Take time for yourself

Self care ideas below!

Take a bath
Listen to music
Take a nap
Watch the stars
Watch the clouds
Light a candle
Let out a sigh
Fly a kite
Sit in nature
Write a letter
Learn something new
Read a book
Take deep breaths
Meditate
Notice your body
Take a walk
Go for a run
Take a bike ride
Eat a meal in silence
Turn off technology
Move twice as slowly
Find a relaxing scent
Create your own coffee break
Pet a furry creature
Read or watch something funny
Call a friend
Engage in small acts of kindness
Give thanks
Put on some music and dance
Write a poem
Make something
Do some stretches

Daily gratitude

This can boost your mental health, helps you accept change and relieves stress. Gratitude journals are a great way of focusing your attention on positives thoughts/ actions on a daily basis. Writing down three things you are grateful for at the start of the day and three good things that happened at the end.

Make plans for the future

Create short, medium and long-term goals, and when achieving these goals, your brain will receive a boost of Dopamine, also known as your 'feel good' neurotransmitter – which cannot be a bad thing!

Learn something new

It is time to pick up that hobby you have always put on the back burner or have not had time for. Hobbies can help to relieve stress whilst filling free time. Pick up those knitting needles or blow the dust off that old jigsaw puzzle!

- Boredom buster resources: chatterpack.net/blogs/blog/list-of-online-resourcesfor-anyone-who-is-isolated-at-home?fbclid=IwAR1OZ6sLsLRnrXIw7mDfeFXunEZY7sVfyyNbyCl7oc9h0oYP4Iqe6DVX6qs
- National Theatre at Home: nationaltheatre.org.uk/nt-at-home
- Culture in Quarantine: bbc.co.uk/arts

Be optimistic

Focusing on positive not negative. We can lower our rates of depression and levels of stress, not to mention it can increase our coping skills through difficult times, if we can think more positively. This takes time and practice, so a little patience is required!

- Try to be open to humour.
- Follow a healthy lifestyle.
- Identify potential areas of change.
- Practice positive encouraging self-talk.

Staying in touch – out of sight is not out of mind

Online communities

So many various social platforms to do this with colleagues/friends. Have weekly quizzes, maybe watch a Netflix series and compare thoughts at the end but stay in touch with each other. Do not be afraid to over-communicate, it is important that people know you care.

- Zoom
- Microsoft Teams
- Houseparty
- Netflix Party: netflixparty.com

Keep track of what is going on in the outside world

Limit the time you spend listening to the news and reading social media posts and choose your sources wisely. This can often be a cause of anxiety if we overexpose ourselves

.

Do not forget those at home

For those that live with family and friends and trying to work from home, schedule in lunches and breaks with them.

Display empathy and build meaningful relationships

This will enable us to support each other through these challenging times. This can be arranged through a buddying system within businesses/practices.

This should result in a number of benefits:

- improved mental health;
- provide us with higher self-confidence;
- increase your resilience; and
- this can be done by genuinely listening, practicing forgiveness and being present. ■

Xtratherm academy

Support where and when you **need us**

Xtratherm have updated our resources and technologies to support CIAT members in your own changing working situation, to continue to provide the service you can rely on.

We are all getting used to communicating online, particularly in the areas of technical support and CPD delivery. We have met many more CIAT members through our Remote Support for the first time; so that can only be a good thing.

Our webinars and consultations are created with you and your team in mind, covering the areas of interest that you are focused on. While we won't have the opportunity to gather together at the AT Awards this year, Xtratherm remain committed to supporting CIAT as an organisation and you as an individual member.

Let's keep talking.

New & Updated Ways to Work:

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CIAT

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Xtratherm – supporting the AT community

Words by James Evans, Communications & Digital Administrator

Xtratherm have been a supporter of CIAT for a number of years. In 2017 the thermal insulation provider first sponsored the AT Awards and is the headline sponsor for this year's virtual event.

The last couple of months have been different for Xtratherm, Danny Kearney, Director of Marketing & Technical Services tells me. However, production has not stopped as a number of their customers have been working on "COVID related projects" including hospitals. They have also started offering consultations via video link.

Maintaining relationships with less face-to-face contact has been hard. Danny has worked at the firm for 30 years and is pleased that he has "built up great relationships with [CIAT] Regions and individuals". In the past, he notes they "got together on a regular basis, on a personal basis". It's vital that they "keep up communications" he says.

> We build the knowledge of the building industry up as a group
>
> "

Danny is keen to make clear that the company's relationship with CIAT members is more than transactional. He says, "we have met your membership...we've got to know their families!" He says that it is also about building knowledge.

Xtratherm provides CPD sessions to members and has several sessions listed on the AT CPD Register. That is important because it gives them "credibility", but the learning goes both ways.

"We have learned as much from Architectural Technologists as we put across" Danny tells me. Members challenge Xtratherm: "It's you guys that ask the difficult questions!" and conversations with members after CPD sessions and more generally are valuable.

Danny gives me an example, in 2009 he had a conversation with a member about thermal bridging. Within a year they had gifted software for thermal bridging analysis to the University of Ulster. Academics and Xtratherm staff then did training together on thermal bridging analysis. Since then the University has become a resource for Building Control in Northern Ireland to draw upon for their thermal bridging expertise.

"We build the knowledge of the building industry up as a group" Danny tells me.

Interactions are still taking place. The company recently ran a CPD session, alongside Eddie Weir PCIAT for the Northern Ireland Region. They discussed issues including COVID-19 "so that we could both understand each other's needs". The company are working on their own online portal to provide more CPD.

Danny is positive about the future for members. "The future of building is all about competency" he tells me. The goals have been set and Chartered Architectural Technologists are well placed to competently execute them. Xtratherm hope to support them over the next few months – it will be making contact with Regions and Accredited universities to do so. In the next few years, he believes, Architectural Technology professionals will "shine".

Xtratherm have launched upgrades to their remote support services along with external online learning for designers, builders and merchants. Consolidating its learning and support resources under the Xi Academy, the new suite of communication tools allows the teams to maintain personal contact with customers whilst distancing. Xtratherm is responding and adapting to the evolving COVID-19 situation. They have updated their resources and technologies to support customers whilst distancing measures remain.

What's new?

Immediate Callback Service:
An immediate callback facility is available from an expanded Technical Help Desk. Immediate support that's unrivalled in the industry.

Live webinars:
Meetings and training on sales and technical issues – on subject matter that is important to our customers.

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A bespoke learning platform allows for customer learning and review of meeting presentations in their own time. A valuable resource to back up online meetings and seminars.

Visit xtratherm.com for full details. ■

Future Homes Standards – What does the future look like for the design of new homes?

Words by Steven Hedley MCIAT, Vice-President Technical

In June 2019, one of the last acts of Prime Minister Theresa May, was to commit the UK to net zero emissions by 2050. This made the UK the first major economy and member of the G7 group to legislate for net zero carbon emissions and pass the target into law, but how do we stop this from being another 'Zero Carbon Homes' debacle?

The reported cost of scrapping the Zero Carbon Homes by 2016 initiative is said to have cost the home owner an additional £2bn in wasted energy in the period 2016–20 not to mention the impact it had on the UK's carbon footprint.

The vehicle in which are charged to deliver these targets is the Future Homes Standard (FHS). The FHS proposes that from 2025 all new homes will have world-leading levels of energy efficiency, in terms of performance, incorporating low-carbon heating systems and be totally detached from the gas network.

Homes are a significant contributor to greenhouse gas emissions in the UK

As we prepare for this, the first stage of implementation will be the uplift to standards in Part F and Part L of the building regulations for new dwellings in England which are to come into effect later this year. Following the launch of MHCLG's first consultation, there is now the opportunity for review of the proposed changes, to look at what impact they will have on how we design and how industry can drive the change to ensure we get the Future Homes Standard right.

Proposals

Homes are a significant contributor to greenhouse gas emissions in the UK, responsible for 15% of our total emissions in 2018. However, what is slightly more alarming is that unlike other sectors, emission levels from residential homes actually rose from 2017 to 2018.

The proposed changes to the building regulations for England suggests that a reduction in carbon emissions from new housing (a second consultation is to follow to address the proposals for retrofit in existing homes) will be achieved via one of two options:

Option 1 - 'Future Homes Fabric'

This would achieve a 20% reduction in CO_2 from new dwellings, compared to the current standards. This performance standard is based on the energy and carbon performance of a home with:

- very high fabric standards to minimise heat loss from windows, walls, floors and roofs (typically with triple glazing);
- a gas boiler; and
- a waste water heat recovery system.

Option 2 - 'Fabric plus technology'

This would be a 31% reduction in CO_2 from new dwellings, compared to the current standards. This option is likely to encourage the use of low-carbon heating and/or renewables. The performance standard is based on the energy and carbon performance of a home with:

- an increase in fabric standards (but not as high an increase as in Option 1, likely to have double rather than triple glazing);
- a gas boiler;
- a waste water heat recovery system; and
- photovoltaic panels.

At first glance, both options look viable proposals, with the Government preferring option 2 due to the initial projected monetary savings. It is however the method in which the new regulations will look at the energy efficiency and fabric of a home that may provide cause for concern.

Under the current Part L 2013, the Fabric Energy Efficiency Standard (FEES) metric sets the benchmark for a building through its 'notional building' and minimum u-values for fabric standards. This helps new homes retain relatively 'good' levels of thermal competence and has always been seen as a useful benchmark for thermal design. Although the proposed Part L 2020 sets out new and improved minimum fabric standards, which is welcomed, the use of the FEES target has been removed, thus resulting in the potential for new homes to be designed and built with poor energy consumption whilst being offset with healthy reductions of CO_2 emissions.

Some might question whether the 2020 targets are ambitious enough. Should we be driving a fabric first approach in order that we are designing our homes as energy efficiently as possible in order to eradicate the need for expensive retrofitting when more stringent regulations are introduced in the future?

Another proposal within the FHS is to remove the ability of local authorities to demand higher energy efficiency standards than those set out in Part L. This could have implications for localised energy reduction targets. For example, the London plan, which currently sets carbon emissions for new homes 35% lower than Part L.

Currently, 65% of local authorities across the UK have declared a climate emergency and set their own unique planning targets. It is understood that Local authorities tend to be much better placed to assess local need and viability. Restricting the ability of local planning authorities

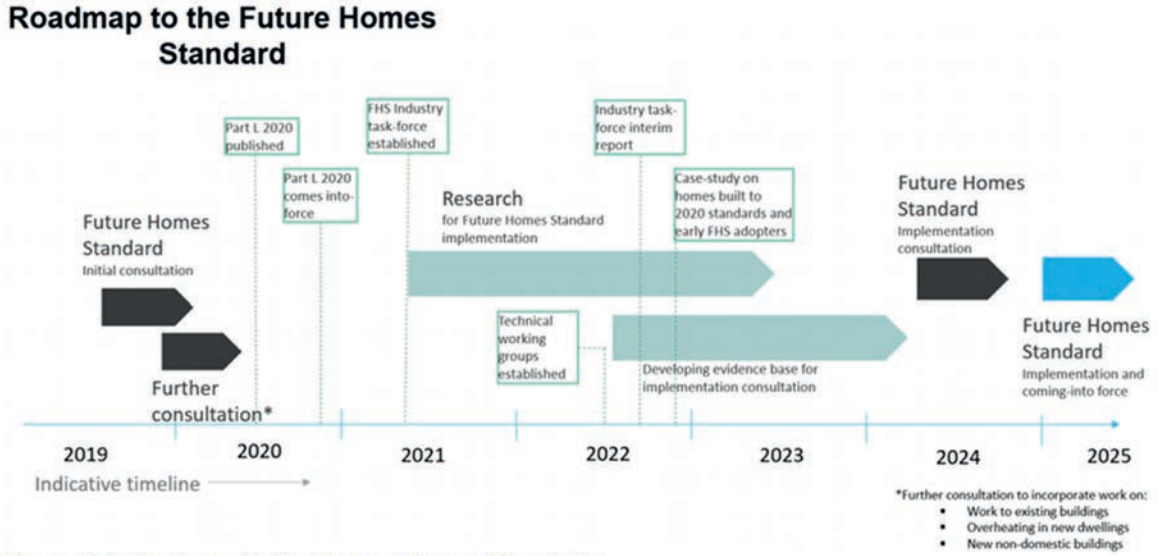


Figure 2.1: Roadmap to the Future Homes Standard

to set higher energy efficiency or zero carbon standards on their own seems at odds with the overall direction of policy on decarbonisation and localism.

Also targeted is the tightening up of transitional arrangements for housebuilders to navigate building regulations approval. At present, housebuilders can build homes to the regulations in force when they started work on a development, even if updated regulations are introduced before it is finished.

The consultation proposes that all new homes must meet the new regulations when introduced.

Rest of the UK

Whilst we are focussing on England, the rest of the UK are also committed to start delivering on net zero 2050.

Overall, the consultation is a big step in the right direction for England, providing two viable routes for 2020 whilst encouraging renewable technologies to develop. The scene has now been set for developing the 2025 Future Homes Standard.

To deliver the 2025 FHS and net zero by 2050 and to keep up with other nation's developments, it is probable that the UK will need to take greater steps in the not too distant future. The specification and regulation landscape is moving quickly and needs to be constantly reviewed to minimise technical, operational and financial impacts on the construction of new homes.

The England consultation is now closed and documents can be viewed on the gov.uk website. ■

	England	Scotland	Wales	Northern Ireland
Section of the standards / regulations that relate to energy	Part L	Section 6	Part L	Part F
Last major revision	2013	2015	2014	2012
Key announcements	Chancellor's Spring Statement 2019: *'A Future Homes Standard, to be introduced by 2025, future-proofing new build homes with low carbon heating and world-leading levels of energy efficiency.'* *'...we will introduce a Future Homes Standard, mandating the end of fossil-fuel heating systems in all new houses from 2025'.*	Scottish Government's Programme for Government 2019/20 commits to: *'...new standards to reduce energy demand, and associated carbon emissions, within new buildings by 2021'* and to requiring: *'new homes consented from 2024 to use renewable or low carbon heat'*	Welsh Government's Prosperity for All report notes they have: *'recently commenced a further review of Part L, which is intended to be the next step on our journey towards a low-carbon built environment.'*	No announcements to date. With the recent restoration of devolved government in Northern Ireland, and the publication of a major new consultation on Energy Strategy, we expect announcements in this area over the coming months.
Next steps	New part F and L to be launched mid/late 2020	Consultation spring 2020	New part F and L to be launched mid/late 2020	TBC

Steel framed rooflights – what lies beneath?

Words by Paul Trace, Stella Rooflight

It is widely acknowledged by both professionals and consumers that steel is the premier choice for conservation rooflights. Able to achieve great strength, while retaining a thin framework and a low profile finish, steel framed rooflights provide an appearance that modern alternatives can only dream of replicating.

Commonly specified in both period and contemporary projects, a steel framed rooflight design normally offers a superior glass to frame ratio, when compared with modern bulky rooflights. This extra access to both natural light and ventilation is one of the reasons why steel frames remain a popular choice. In certain applications, such as Listed buildings, conservation areas or sensitive replacements, steel framed rooflights should be the only choice, as these offer the most faithful replica of an original Victorian design.

The saying goes that 'beauty is only skin deep', however, when choosing or specifying rooflights it is important that you look beyond appearance and take into consideration the longevity and maintenance requirements of the materials used.

While the appearance of a steel framed rooflight is second to none there is an inherent shortcoming in the use of steel, particularly when used in a roof, and that is the potential for it to rust. The most common steel used for rooflights is mild steel (sometimes referred to as carbon steel) and in their naked form these materials offer virtually no resistance against rusting and will begin to corrode from the moment it comes into contact with the atmosphere.

Aren't all steel rooflights the same?

Mild steel (iron containing a small percentage of carbon, strong and tough but not readily tempered), also known as plain-carbon steel and low-carbon steel, is now the most common form of steel for conservation rooflights, because of its relatively low price and versatility.

Almost all rooflights are produced with some type of paint coating, which is designed to keep the main structure away from atmospheric conditions; in the case of mild/carbon steel rooflights this prevents them from rusting. It is worth noting that mild/carbon steel framed rooflights are totally dependent on the paint to stop the frames rusting and even the slightest damage during installation can signal the demise of your rooflight.

One of the ways to avoid the risk of rusting associated with steel framed rooflights is to specify a 316 marine grade stainless frame.

The most obvious difference between carbon steel and stainless steel is the ability to resist corrosion, with stainless steel (as the name implies) being the more corrosion resistant material. Both carbon steel and stainless steel contain iron, which oxidizes when exposed to the environment, creating rust. It is the presence of added chromium in stainless steel, which makes it more corrosion resistant than carbon steel.

Without wishing to overcomplicate the point, the chromium will attach itself to oxygen more readily than iron, but when the chromium attaches to the oxygen it creates a chromium oxide layer, which protects the rest of the material from degradation and corrosion. Carbon steel does not have enough chromium to form this chromium oxide layer, allowing oxygen to bond with the iron, which results in iron oxide or rust. Therefore, if corrosion resistance is a key factor in your choice of specification, stainless steel has to be the way to go.

Protective coatings

Steel framed rooflights will usually have a powder coated finish as this offers a better final appearance than wet spray alternatives. Unlike mild/carbon steel, which relies on the coating for complete protection, a 316 marine grade stainless steel rooflight mainly has the coating for aesthetic purposes.

Powder coat is a type of coating that is applied as a free-flowing, dry powder. Unlike most conventional liquid paints, which are applied via an evaporating solvent, powder coating is typically applied electrostatically and then cured under heat. Powder coating is mainly used for coating of metals and is designed to create a finish that is tougher than conventional paint.

Done correctly powder coating provides a high-quality finish, which gives metalwork a more durable layer than liquid paints can offer, while still providing an attractive appearance. Applied to the right environment criteria, powder coated rooflights are more resistant to diminished coating quality as a result of impact, moisture, ultraviolet light, and other extreme weather conditions.

Powder coat applications should always be applied to a standard suitable for the location of the rooflight. The environment in which a rooflight is located is classified from C1 to C5 with the lower end of the scale (C1) for internal use in buildings with clean atmospheres, right up to marine coastal/industrial with aggressive atmosphere (C5). The most common application for steel framed rooflights is to a C3 standard, which covers urban and industrial atmospheres with moderate sulphur dioxide pollution. While this should give a good standard of protection for most places in the UK there are a number of factors, which could affect the lifespan but are often overlooked.

It is easy to identify a property which is within 5km of the coast and specify the required marine coating, however if a property is located close to a road which is heavily gritted during the winter months this could potentially be as aggressive and corrosive to the powder coating as a property which is sited within a coastal environment. Ultimately identifying the right classification is not always as straightforward as looking up a postcode and careful consideration should be given to any environmental factors which may impact on the lifespan of the protective coating. Choosing the right durability is a question of cost but if the system doesn't last long enough, rectification could be expensive for the end user.

To remove any risk and to make this confusing process easier, all Stella rooflights are painted to a C5 classification as standard so regardless of where your project might be, you can be assured of the highest level of paint quality at all times.

Paint coats are not magic coats!

Industrial coatings are no different to the paint on your car – they need cleaning and maintaining. Accumulated dirt may affect the design life of the system, and any mechanical damage almost certainly will. Therefore regular inspections should take place and minor damage must be touched up.

What many specifiers and end-users do not appreciate is that maintenance is not only required to keep up the aesthetic appearance, it is essential to prolong the life of the rooflight. From the moment the product is installed, the end-user is entirely responsible for providing that maintenance and failure to do so is likely to render any warranty void. The care and maintenance of a rooflight situated in a C3 environment is likely to be on an annual basis but this can increase to every three months in a coastal C4 location.

One of the biggest causes of steel rooflights rusting is a failure to adhere to maintenance guidelines either due their inaccessible location or an unwillingness to undertake the work by the end-user. In fact it is often only when the rooflight is leaking that action is taken, and in most cases this is far too late to save the rooflight from a

level of degradation that renders the product unsafe or no longer functional. It is normally at this point where the homeowner is told that the warranty is void and the problem is theirs to deal with.

With a mild/carbon steel rooflight it is essential that the specifier and end-user are fully aware of what is required to extend the product life. All rooflight companies will issue guarantee and maintenance paperwork with their products and most go to great lengths to publish the information on their websites but it is not uncommon for that information to be overlooked or lost and only returned to long after the time for maintenance has passed.

It is not just coastal rooflights that benefit from the longevity offered by stainless steel and if the rooflights are to be fitted in an inaccessible location, or your client is unlikely to head out with a ladder and a bucket of soapy water on a regular basis, then 316 marine grade stainless should be your first choice. There is no getting away from the initial price uplift of stainless in comparison to mild/carbon steel but without the overhead of repair or replacement, the whole life cost of stainless can be considerably less than the lower quality alternatives.

In summary

If you are intending to specify steel framed rooflights be it for either a traditional or contemporary project, then the advice would be to give greater consideration to the type of steel rather than just the appearance. You need to consider the location of the property, further than simply its proximity to the coast, and whether there are any factors that may adversely affect the coating life. Not only this but you should make your clients aware of their responsibilities to undertake the maintenance and check with your chosen supplier as to what level of care is likely to be required.

With some leading rooflight companies only offering a standard twelve month warranty on their products and always having the strict maintenance requirements to fall back on, you may want to simply consider designing out any potential issues by specifying 316 marine grade stainless from the outset. While all rooflights and all paint coatings will require some level of care, a stainless option will not suffer the same catastrophic material failure as a mild/carbon steel rooflight should your client not keep up with the maintenance.

If you have any questions or require further information concerning the use of steel rooflights in your own project, please contact one of the Stella Rooflight team on 01794 745445 or visit stellarooflight.co.uk ■

Exclusive book abstract

Planning Learning Spaces

by Murray Hudson and Terry White

Can school design help us to realise a new vision for education that equips young people for life in a fast-changing world? How can we design schools for the next generation for jobs that do not yet exist? Can we help children to want to go to school in the morning with design? These are the big questions at the heart of *Planning Learning Spaces*, a new guide for anyone involved in the planning and design of learning environments.

How to approach school design

Engaging a whole community is the key to developing a school that is fit for the future and reflects new ways of learning.

Learning environments are exciting places to design. They are complex public buildings – often the first public buildings that young children will experience. They need to sit centrally and proudly in the community and provide a homely, nurturing space for students. The needs of twenty-first Century learning mean that bringing these elements together has become more of a challenge. Designers are designing spaces that do not reflect the learning environment that they personally experienced and are creating spaces for new activities that are yet to be fully developed or even imagined. New technologies constantly change the requirements of these spaces.

Just as students and teachers need to acquire new skills for the modern world, so too do designers. New ways need to be found to engage the whole school community. Learning environments around the world show that pedagogy, curriculum, society, staffing and politics all influence the design. There is no single template for the design of schools: designs need to respond to each school's unique ethos and context. However, one fundamental design element appears time and again: a rich variety of spaces that gives teachers and students greater choices in how they want to teach and learn. The right configuration of spaces can truly act as a catalyst for change, promoting the benefits of working collaboratively and creatively, letting students take ownership of their environment and helping school communities to deliver the curriculum in new ways.

Observation is a fundamental part of the design process. Designers must look at how spaces and resources are used and how a change of spatial arrangement could improve the learning environment, opening up new and unimagined opportunities.

The school experience is about 'growing human beings'. Schools are not only about learning and teaching but should also provide spaces that encourage young people to become engaged members of a community. The dining spaces must be pleasant and encourage discussion; locker areas should have good levels of passive supervision; and there should be sufficient space both within and outside the school for young people to make choices about how they spend their social time.

Discussing the learning environment will enable and encourage change within the school both for students and teachers. But change doesn't happen immediately, and the environment must not be too challenging for the school community who will need time to absorb and adapt to change. Transformation is therefore often effected by small steps.

Designers are partners in the creation of the new space and should challenge and stimulate dialogue around it. They should open the school community's eyes to the art of the possible; they are not there to write the education brief, but to respond to the school's requirements. Designers should take their time getting to know the schools they work with – not only the physical constraints, but also the culture and vision for the future. The people involved in the project may have little experience of working with designers, so it is useful to develop a common language from the start – through conversation, visits to relevant buildings and workshops.

It is important to consider, for example: What does innovation look like for this school? Do we all understand the meaning of hubs, pods and breakout spaces? Would it be useful to mock-up a space to understand its size and how it may work? Is the school using the building project as a catalyst for change? Designers have found that in-depth focus meetings are a good way to engage a large number of people at once, for briefing and sharing initial ideas.

It is the designer's role to fully analyse the site and buildings, then respond to constraints and turn them into opportunities. Typical constraints that designers face may include the following:

Budgetary: repurposing existing buildings often results in interesting learning environments and will create less disruption during construction.

Topography: a sloping/stepped site can be used to create multiple levels, amphitheatre stairs and other outdoor learning spaces.

Making the most of outdoor spaces: even in cooler climates, outdoor space should be an extension of the learning environment, as defined and varied as indoor spaces.

Safety of pupils when working on occupied school sites: provided the safety of the school community is the top priority, a building programme can be a wonderful learning tool for the students and stakeholders.

Poorly defined brief: while some schools believe they should arrive with a full brief, designers can get a deeper understanding of a school's requirements when they are part of the team defining the brief.

Key considerations for the best learning environment

- Ensure 'buy-in' from all staff; without this the design will fail.
- Create a comfortable environment – get the basics right.
- Enable smooth, easy flow between spaces.
- Develop a common language between designers and staff; discuss what works and what doesn't. Agree on what changes need to be made to enhance a new way of learning, and the considerations of the individual school.
- Recognise the importance of undefined space (that is, not the classrooms, offices and so on) – the 'glue' where learning and socialising interact.
- Create mock-ups to test ideas before building them.
- Use all available tools to explain ideas clearly to the many people involved in the project, the majority of whom might not understand how to 'read' drawings, proportion or space.
- Visualise a day in the life of a student, teacher, parent and the leadership and support teams.
- Remember that the outdoors is as important as the indoors.

Advice to designers

- Take time to research best practice from around the world and the opportunities provided by changing technologies.
- Spend time in schools observing the link between pedagogy and space.
- Develop your communication skills.
- Design environments that can be used in ways that were never imagined.

Implementing your vision

Who wants to be the designer that builds the last 'old school' school?

Innovation in school design is not a 'nice to have', it is a necessity. To re-create the factory model buildings of the past will not only fail future generations, it will embed failure. The future requires a rethink on curricula and the spaces in which they are taught. It is not about optimising schooling, it is about optimising learning.

A school is not a static space, it is a structure that should be sensitive to and responsive to both the internal and external environments, with the ability to adapt and evolve. Space and pedagogy go hand in hand.

The learning spaces you are about to design need to be resilient and versatile enough to empower all types of learners. The roles of teachers and students are evolving and relationships will change. Carefully consider a move from teacher-directed classroom practice to a teacher-enabled approach. Create spaces that allow teachers to interact with students, peers and the community.

Innovation in school design is not a 'nice to have', it is a necessity.

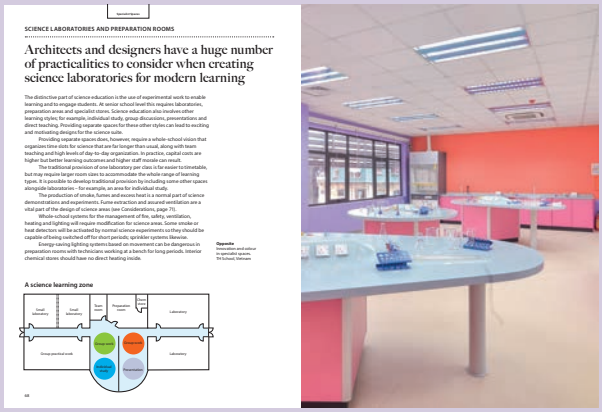
Students are engaged and enabled through a more personalized curriculum experience, and therefore the space in which they learn should be flexible, imaginative and dynamic.

The design should be driven and shaped throughout the process by constantly posing the questions, why? and how?

Develop the planning of learning spaces through a consultative, collaborative and research-based approach. After all, who wants to be the designer that builds the last 'old school' school?

Murray Hudson and Terry White have brought together educationalists and innovative school designers to pool their collective expertise and inspire the design of more intelligent learning spaces. The authors prompt readers to question common assumptions about how schools should look and how children should be educated: Why, they ask, have so many schools changed relatively little in more than a century? What form should a school library take in the internet age? Do classrooms really have to be square? The book also tackles vital elements of learning space design such as the right lighting, heating and acoustics, and explores the key role of furniture, fixtures and fittings.

With contributions from leading professionals, including Herman Hertzberger and Sir Ken Robinson, Planning Learning Spaces is an invaluable resource for Architectural Technology professionals, interior designers and educators hoping that their project will make a genuine difference. ■

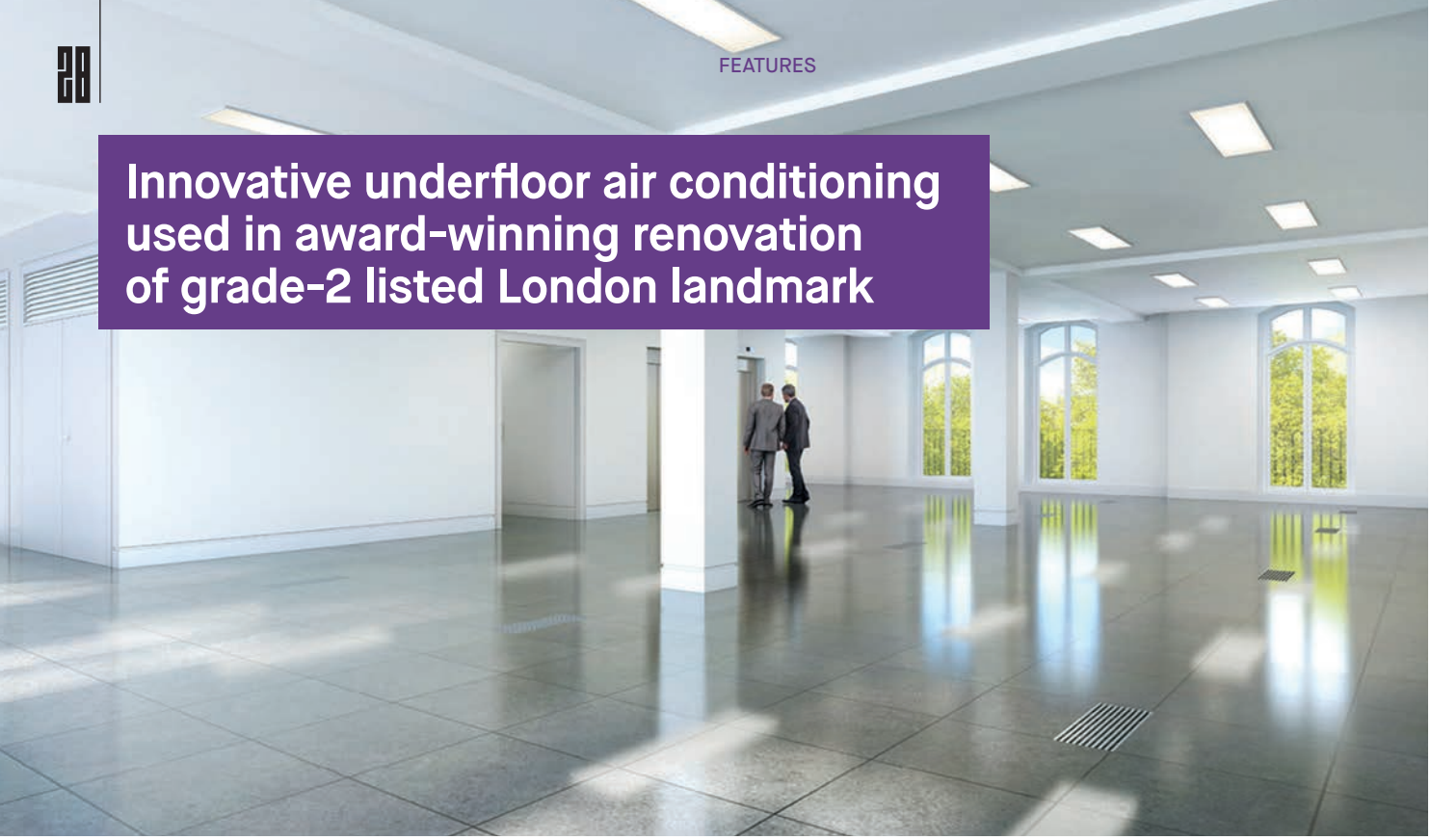

SCIENCE LABORATORIES AND PREPARATION ROOMS

Architects and designers have a huge number of practicalities to consider when creating science laboratories for modern learning

A science learning zone

Laurence King Publishing Ltd, ISBN 9781786275097, RRP £24.99

This book was published before COVID-19 so other restrictions are now in place



Innovative underfloor air conditioning used in award-winning renovation of grade-2 listed London landmark

24 St James's Square, London

AET flexible space was specified to supply its innovative CAM-V underfloor air conditioning (UfAC) system for the refurbishment of 24 St James's Square, completed in early 2020.

The design brief was to maximise floor-to-ceiling heights and enhance the double aspect interior. One of the key challenges was the need to preserve key architectural features, whilst at the same time providing, flexible, modern, premium office space.

These needs could not have been met using a conventional overhead system, which would have taken up valuable headroom and created awkward junctions where window heads met suspended ceiling grids or exposed services.

The AET downflow units promptly stood out as the obvious candidate for several reasons ...

Using an underfloor air conditioning system enabled the designers to eliminate ceiling-based services allowing for a plasterboard ceiling to be installed tight against the soffit and down stand beams. Thanks to the AET system, key architectural elements of the building were preserved, as well as increasing natural light levels and enhancing the striking double-aspect interior.

"The AET downflow units promptly stood out as the obvious candidate for several reasons, including having the absolute minimum requirement for floor void height, and offering excellent distribution of cooling, heating and ventilation evenly across the whole floor whilst reducing energy consumption." - M&E Consultant, Vic Holloway (Edward Pearce LLP).

AET's UfAC system's make use of the space beneath a raised access floor to create a ventilation path, eliminating the need for ceiling-based mechanical services helping to maximising the floor to ceiling heights creating a brighter and more and airy office environment.

A mix of CAM-V22 & 33 units were installed across the eight floors of office space. Roof mounted high efficiency heat pump units serve the refrigerant coils in each CAM's. Conditioned air is delivered into the space via AET's market leading TU350 slimline Fantile™ units which sit 160mm within the floor void.

To avoid unwanted grilles at high-level AET designed bespoke floor extract grilles that look identical to a Fantile™ units, to allow room air to be extracted directly from the floor void enabling the interior aesthetic to remain consistent and simplify duct routes within the buildings core.

Common complaints from staff, prior to the refurbishment, were variations in temperature across the office space, high level cold draughts and a lack of natural daylight light. An UfAC solution however, provides greater individual control of localised temperature unobtrusive movement of air and makes for a more comfortable, brighter working environment.

The 24 St James's Square project has already won the Best Office Architecture London award at the 2019 International Property Awards and is currently shortlisted for Retrofit Project of the Year at the H&V News Awards 2020. The building is being let as Grade A office space by BNP Paribas Real Estate who advised the developer, Misland Capital, to consider AET's system's based on their positive experience with 28 Saville Row which AET completed in 2014. ■

Total area: 1600 m².
System: CAM-V - floor supply, high-level return

COVID-19

When hospital buildings aren't healthy

Words by Andrew Cooper, Managing Director of Smartlouvre Technology Limited

Air conditioning is becoming required more and more to manage the temperature in buildings. We all know that we are spending increasing amounts of time indoors, avoiding the elements, and whilst we do, the fact is, we are damaging those elements.

One question that I have asked myself and peers many a time, is why are we not building better to accommodate the effects of the elements? The answer is a wide range of justifications to the fact that we are. My argument in response is that in a lot of cases, we are avoiding the obvious. To build with the effect of the elements in mind, we are utilising technology in cooling that does quite the opposite.

Hospitals and hospices are the biggest contradiction. In a healthcare environment the occupants need daylight more than ever. I do not need to harp on about the benefits. A connection to the outdoors and having access to natural light helps patients heal faster, making for a shorter hospital stay, and in general, the therapeutic environment that is strived for.

Whilst one would assume methodology for optimising daylight was applied in the initial phases of the building design, what were the designer's/client's overriding decision factors for the final design? There is always a compromise. Was it high levels of daylight alone? Energy efficiency? A combination of both?

What about managing the heat that the daylight also provides? Mitigating glare? All too often disregarded, or deprioritised, and found to be a problem after the building is occupied. The Facilities Manager then takes on the burden.

In 2018, a UK heatwave saw NHS trusts bulk-buying mobile air-conditioning units, fans and bottled water to help beat the negative effect of temperatures. It is a widespread problem, only expected to get worse. 2020 is predicted to be the warmest year in UK history when we are also dealing with a global Coronavirus pandemic.

Hospitals are complex builds to deliver, no-one would deny that. Installation of air conditioning uses large amounts of energy and contributes to climate change. Ventilation is needed, especially whilst dealing with the pandemic, but so is heat and light control.

Worse still, healthcare trusts who do not have imminent budgets for new buildings are seeing their running costs rise, year after year, in order to manage temperatures in buildings built when these levels of temperatures were not even a consideration.

The committee on climate change (the Government's official climate change advisors) stated in a recent report that the types of hospital ward that are vulnerable to overheating currently make up 90% of the total stock (by floorspace). A recent Cambridge University report found that some £17.5bn of upgrades could be needed to make UK hospitals resilient to the heat through new shading measures and improved ventilation. Overheating in hospitals is a serious issue.

The general design guidance for healthcare premises as defined by the Department of Health isn't prescriptive when it comes to solar gain and glare. The management of heat and glare is left to shading solutions that at best, remove only some of the problems, or at worst, also remove the benefits of the glazing and/or the daylight.

Internal blind systems remove visibility and a connection with the outside world and only protect the room from a minimal amount of heat gain. External shading systems do work but are expensive to install and maintain as well as reducing the quality of daylight. Even the most recent advances in glazing technology reduce the view out.

What is the answer? How do you get optimum daylight distribution, visibility to the outside world, protection from glare and the opportunity for ventilation?

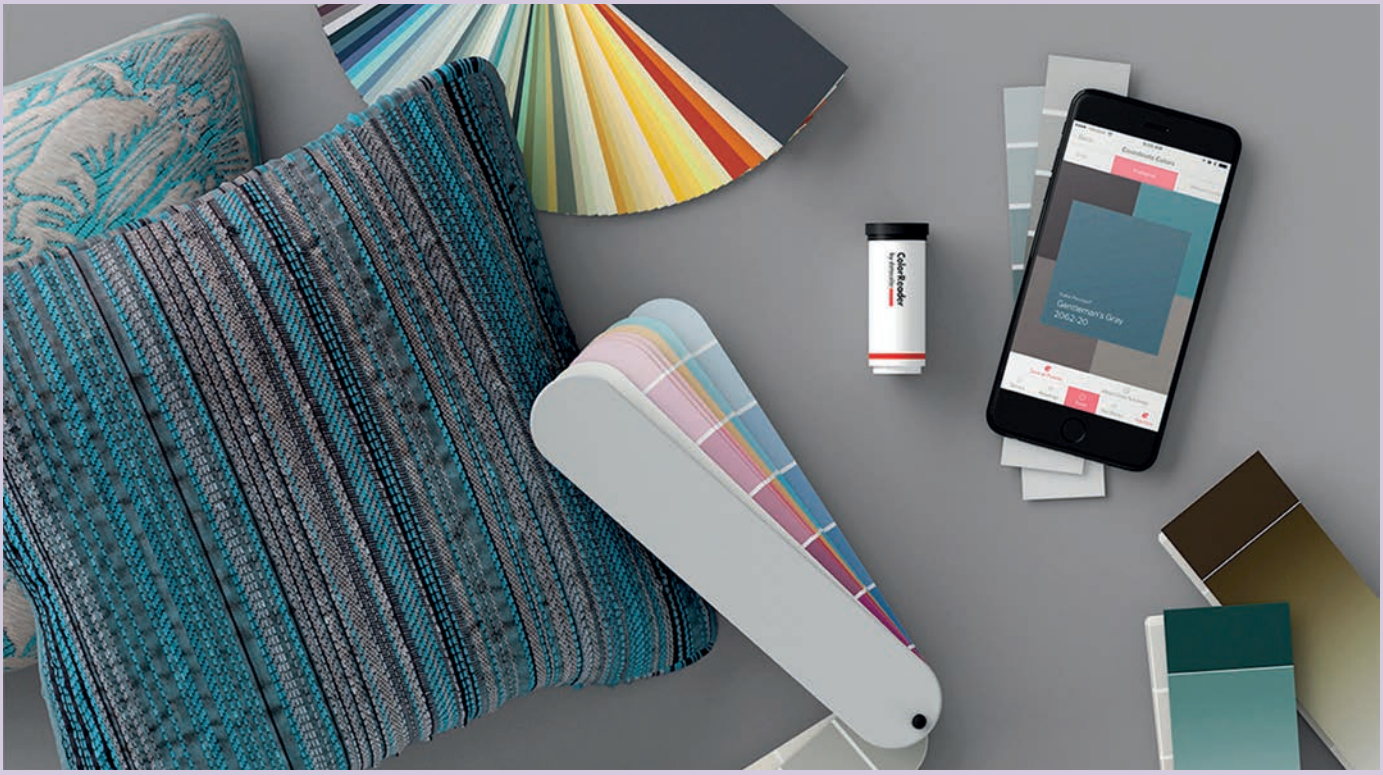
You stop the heat and light before it hits the glass, with a metal fabric, with micro fine louvres woven in to dissipate the sun's heat and energy but not block natural daylight, natural ventilation or vision out.

This solution works totally differently from traditional external and internal blinds, which reflect, distort and restrict vision and light, MicroLouvre™ fabric simply and invisibly neutralises solar heat gain and glare before they even reach the window, working non-stop like a heat exchanger dissipating the sun's heat and energy into the atmosphere.

It does not diffuse daylight, it provides all the benefits but not the negative impact of excessive heat gain and glare. The louvres are micro fine, and angled at a level to ensure optimum light in, and visibility out, whilst protecting the building occupants from the heat, glare and even external viewing in. It is known as angular selective technology.

The performance of this fabric has been tested, time and time again by standards agencies, scientists and researchers, including BRE. It has been around since the 1940s but in recent years, it has been honed, and the production process improved, so that it remains the best solution for solar shading. ■

The future of colour selection



There is no doubt that colour selection is a fundamental part of the architectural process - an essential component for impactful design. The emotion we evoke with our selection can say so much about a space; therefore, it is vital to put as much thought into this choice as we would any other critical element in the design phase. As happy as you may be with the space you have created, if the colours are not communicating as you would like, then all of that hard work can feel futile.

Technology continues to transform the architectural industry and the colour selection process for the better, and as leaders in the colour management field, global colour solutions company, Datacolor has recognised that a shift to a digital method can ensure quicker and more precise results. Not only does this save the hassle of collecting and carrying paper swatches, preventing loss and unnecessary trips to your hardware store, but also allows you to save time by storing collections and paint codes, making for pain-free selection at your chosen retailer.

The ColorReader is a Bluetooth enabled, portable piece of technology that puts an end to the old fashioned way of choosing and comparing colours, significantly reducing the time it can take to make the right choice, all while improving accuracy.

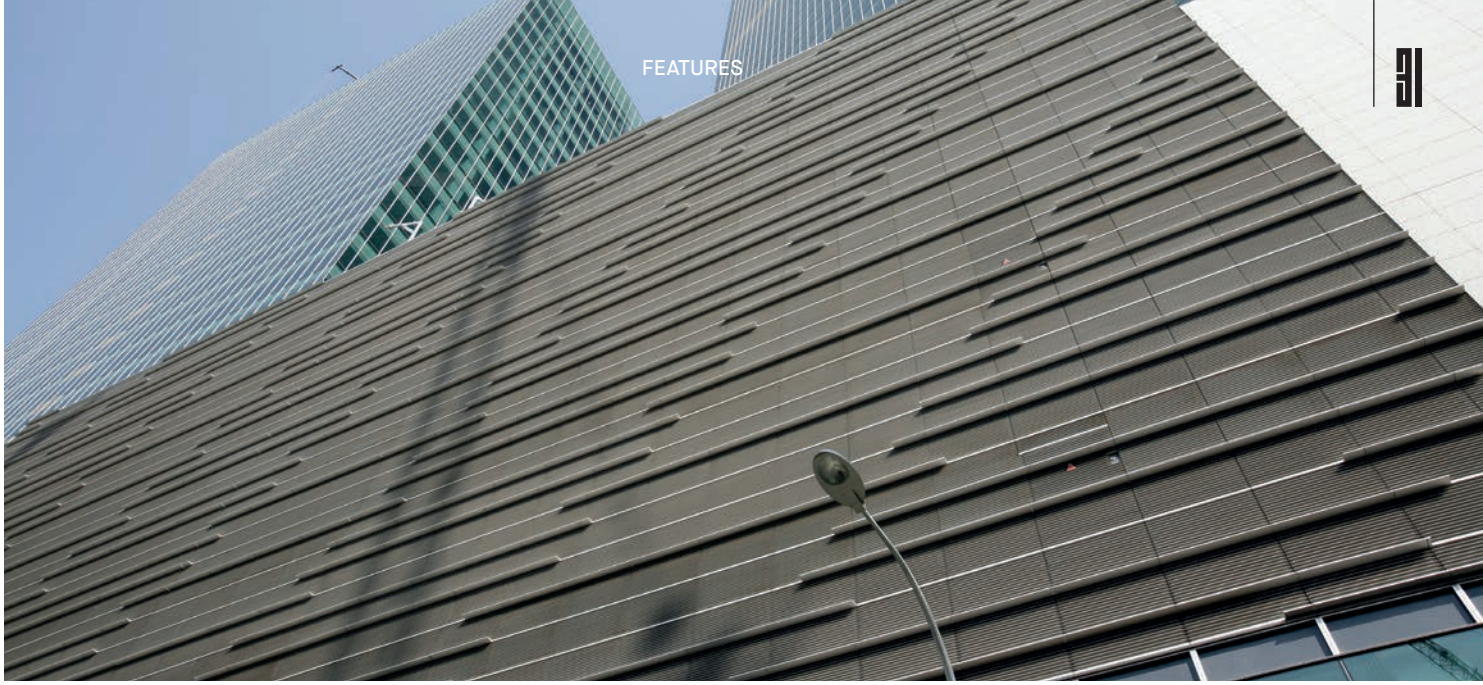
How does it work? The tool pairs with its accompanying smartphone app (available on iOS and Android) and works to identify exact colour codes from the thousands it stores, enabling you to use this information to build a collection of complementary colours, inspiring and guiding you through your renovation plans.

Datacolor has transformed how the perfect palette can be selected and matched with over 90% accuracy; revolutionising a process that once was incredibly time-consuming and not always consistent.

The innovative device will also come in handy for those working on a project that has been partially completed. Take advantage of the simple steps that will take the guesswork out of your job and spare you the hours to concentrate on the things that are crucial to creating the most amazing space. The more often you use the device and save its colour suggestions, the more you will be able to refer to it for the ideation process when working on future projects.

Datacolor has over 45 years' experience in precise colour management. Using their specific knowledge, their team of experts have developed an accurate device that is a must for those who need to identify colours frequently, efficiently and quickly. Design confidently using this pioneering product and never look back to inefficient ways of detecting and working with colour again.

For more, please go to datacolor.com ■



Designers can afford to be creative as well as practical when it comes to louvre specification

Words by Andy Moul, Technical Support Manager, Construction Specialties (CS)

On the face of it, external louvres are a simple solution to allowing air into a building or an HVAC system, with the performance of those louvres often being chosen based on a free area. However, there are many more criteria to consider. Understanding these requirements and specifying the correct system is essential to ensuring the desired building performance and aesthetic are achieved.

One of the primary applications for louvres is to protect a building's mechanical and electrical equipment from overheating due to insufficient air supply, or damage resulting from rain water ingress.

Louvres are also important for maintaining natural airflow through a building, which is crucial to creating healthy interiors. A naturally-ventilated environment helps facilitate year-round interior comfort, which in-turn leads to greater occupant contentment.

There are many louvre systems available, offering different blade profiles and performance characteristics. The simple and economical louvres utilising an essentially flat blade profile usually provide good airflow, but poor rain defence. They are therefore seen as an ideal solution where the primary function is vision screening.

Ventilation louvres, featuring a drainable blade design, are often chosen when airflow is a key consideration. They may provide an adequate rain defence in light rain, but their performance generally falls short in wind-driven rain conditions.

When potential rain penetration is an issue, the high-performance louvre models with an integral water collection and drainage should be considered. These systems are purposely designed to prevent wind-driven rain ingress into the building, whilst allowing good passage of air. This is achieved through either a complex single-blade profile extrusion to give a slim louvre depth or a deeper, multi-bank system. In all cases, performance louvres utilise an effect commonly referred to as 'tangential separation' to expel water from the airstream.

Louvres are an important part of a building's overall make up, for their effective application, a balance between form and function must be struck when it comes to their specification.

Grounds for specification

Traditionally louvres have been specified based on 'free area'. This phrase simplistically relates to the gaps between blades in louvre design which facilitate airflow, but does not quantify airflow efficiency. Designers and service engineers should be placing more importance on the design pressure drop and aerodynamic airflow efficiency. This is a true indicator of a louvre's performance, which ensures mechanical equipment has the required airflow to optimise function.

Another important factor in terms of louvre selection is site location and position of louvres on the building, as exposure to prevailing weather conditions – in particular wind direction – will affect the amount of potential wind-driven rain penetration.

Depending on a project's functional requirements and available space, a differing design approach can be considered. Traditionally, a standard ventilation louvre installation with a wide plenum chamber behind it to collect and drain any ingress of water was used.

The high-performance systems currently available allow for a more space-saving approach, whereby equipment such as HVAC systems can be located closer to the louvre opening without the worry of rain ingress.

When it comes to the selection of a high-performance louvre system, third-party test data should be examined to ensure a project's functional requirements will be met. A British and European Standard: BS EN 13030:2001 was developed by BSRIA to enable specifiers to directly compare the performance of the different weather louvre systems available. The test utilises fan-driven, wind simulation equipment propelling air towards the louvre at a 13m/s (30mph) velocity, and carrying water at a rate of 75l/h (litres per hour) per square metre of opening, to simulate rain. During the test the air is drawn through the louvre at velocities from 0m/s to 3.5m/s (in 0.5m/s increments), to simulate demand from ventilation equipment.

The amount of rain that penetrates through the louvre is then measured and expressed as Penetration Class, with Class A indicating the most and Class D the least effective louvre in terms of its rain defence performance. At the same time, the test evaluates the louvre's airflow characteristics, which are averaged over a range of velocities and presented as a single Discharge/Entry Loss Coefficient, ranging from Class 1 (excellent airflow) to Class 4 (poor airflow). The resulting classification for the louvre system combines both performance aspects and should always be presented in relation to a specific face velocity, e.g. a louvre can be denoted as being Class A 2 up to 1m/s.

Where soundproofing and airflow are simultaneously required, acoustic louvres are an ideal solution.

Another specification consideration, which can have a detrimental effect on occupants within public and commercial buildings, is noise pollution. Where soundproofing and airflow are simultaneously required, acoustic louvres are an ideal solution. These systems can be installed as standalone units or used behind other types of architectural louvres. They commonly range in depth from 150mm to 600mm, depending on the level of sound reduction performance offered. Therefore, appropriate provisions need to be made to accommodate and support these bulky and heavy modules.

All performance considerations such as required airflow, the maximum acceptable pressure drop, and the degree and depth of acceptable water penetration should

therefore be balanced with the building's envelope design – hence the need for a 'form and function' approach.

Design considerations

Whether louvres are integrated into a building façade, or used as simple vision screens on a roof, there is always an aesthetic requirement, as they need to provide a specific function whilst blending in or contrasting with the rest of the building envelope, depending on the design intent.

Louvres are available in a wide range of designs to suit different applications. A louvre system that uses hidden mullions, for example, will help achieve clean, continuous, architectural lines because the support system is behind the blades, making the mullions almost invisible. These types of louvres are often used where there are multiple or irregular openings on an elevation. The maximum length of the single blade is typically 4m (up to 6m max) due to transport and installation constraints. These louvre models are typically supplied in break down form and require site assembly.

Louvres with visible mullions, on the other hand, can be used as a design feature to line up with curtainwall panels or windows. Horizontal or vertical-spaced blades make up the body of a louvre panel to allow airflow. In performance louvres, these are installed as multiple banks of formed blades or as slimmer, complex blades designed to turn the air quickly whilst preventing rain ingress. The maximum length of the blade can go up to 3.5m. These systems are typically factory-assembled then installed as complete modules.

A horizontal blade configuration is the most commonly used arrangement, either with continuous blades or incorporating visible mullions as vertical breaks to align with other building elements. However, in terms of pure functionality in relation to wind-driven rain prevention, a vertical blade configuration will give the best results. This is due to the assistance of gravity in draining the water away from the face of the louvre quickly.

Some performance louvres can be shaped on plan to give curves, or the impression of a curve by using faceted panels. However, it is important to realise that their performance can be reduced; as the drainage characteristics of their complex blade profiles can be affected. If aesthetics are a major specification consideration it is worth taking into account that as with anything customised or bespoke, there is always the likelihood of additional time and cost attachments.

To add interest to the façade, varying blade depths can be used with some louvre systems, or louvres can be hidden behind decorative features such as perforated panels – which can also act as bird and insect screens. However, some of the features can potentially increase a louvre's resistance to airflow, therefore appropriate test data should be checked to ensure a project's functional requirements can be met. ■

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Tenth NBS BIM survey

Words by David Bain, Research Manager, NBS

In 2010, NBS carried out its first survey into a new, emerging way of working: 'building information modelling'. Now, almost ten years later, we have just published the report on our tenth survey into BIM. Here we share some highlights from the latest report, and consider how the industry has changed over the past decade.

Over 1000 people completed this year's survey: one of the best responses we've had to date. We are grateful to those who took the time to participate, including 112 Architectural Technologists and 161 BIM managers (who have often trained as Architectural Technology professionals). We also receive support from other organisations, including CIAT, to promote the survey on our behalf, which we very much appreciate. This summary includes some key results from the survey, as well as free text comments made by Architectural Technologists who took part.

The first BIM Report, published in spring 2011, showed that 43% of survey participants had heard of BIM and 13% had adopted it. In 2020, 73% are now aware of, and using, BIM. The adoption figure was 66% for Architectural Technologists and (unsurprisingly) almost universal, at 98%, among BIM managers.

Almost a quarter (23%) of those 'using' BIM state that they do so on all projects (also 23% for Architectural Technologists and 24% for BIM managers). So, for some organisations, BIM is now 'business as usual' – but is that the whole picture? Probably not. Only 40% say that BIM is the norm for project information: 26% for Technologists and 61% for BIM managers. Plus, are those who say that they have adopted BIM actually doing so? This year, we explored this question further.

'I have no doubt [that BIM is] the future, but it will take time for BIM to become mainstream, it's somewhat muddled at present. Clearer practical direction is needed, more case studies would be really useful to avoid pitfalls. A standardised approach is required'.

We have, in the past, found that some people associate BIM with simply creating 3D models when it is about much more than that. It involves managing information (including that in 3D models) in a consistent and collaborative way. Even now, we do find that some describe their overall approach to BIM as working with 3D parametric models (25%). Encouragingly, however, more people describe what they do as a process, working to an industry standard: either the BS/PAS 1192 series (37%) or the BS EN ISO 19650 series (26%). Unsurprisingly, the BS/PAS 1192 series is followed by a higher proportion of those in the UK. This includes UK-based Technologists (39%). BIM managers are most likely to have adopted BS EN ISO 19650: 45% of those in the UK describe their approach to BIM in this way, despite the standard being just over a year old.

Exploring further, we asked which tasks or documents (as outlined in the BS EN ISO 19650 series) BIM adopters were involved with. We find that many are common on BIM projects: BIM execution plans (67%), common data environments (67%) and information standards (58%) in particular. Many Technologists are involved with these items: 62% with CDEs and 60% with BEPs, for instance. Unsurprisingly, the figures are highest for BIM managers, where 89% are involved with BIM execution plans. As collaboration is a key aspect of BIM, sharing information in a consistent way is critical. There are frequent examples of this happening, with over two thirds (68%) following a naming convention for all information that is shared (6% among Technologists and 80% among BIM managers). While these figures show that BIM (as defined in the standards) is not happening on all projects all of the time, it is common.

Clearly, adopting BIM requires upskilling and gaining knowledge of these standards and processes. It requires substantial changes to workflows. So why do it? Over the years of carrying out this survey, the same benefits have continued to be recognised. In 2020, 71% of BIM users report that BIM has made them more productive, and just over half have experienced increased profitability. These directly benefit the organisations involved, but BIM can aid the management of projects too. Most BIM adopters (85%) state that BIM increases coordination of construction documents, and 72% that it reduces the risks of problems arising. These figures are for those who have adopted BIM. These benefits are also anticipated by many of those yet to adopt BIM (albeit not as many as those who already use it). Respondents to this survey have consistently agreed that BIM results in operation and maintenance savings: 74% in 2020.

'Perhaps more focus on the main benefits of BIM would lead to its more widespread adoption i.e. clash detection/ clash avoidance, the coordination between the disciplines and the 3D visualisation'.

Many of those who have taken the plunge with BIM are now experiencing its benefits. Almost two thirds of these anticipate clients insisting on BIM. It is on projects for repeat clients, who have the opportunity to see its advantages, where survey respondents are most likely to use BIM. There is now a challenge to help others to experience these benefits. While this survey shows that construction professionals are most likely to use BIM on private projects, especially new build, the driver for BIM came from the public sector with the UK Government's mandate. It's likely that BIM is most established on larger projects across both sectors. What we hear from organisations carrying out smaller, often private work is that BIM is not suitable for their projects. Lack of client demand remains the biggest barrier to BIM (64%); 45% state that their projects are too small and 36% that BIM is not relevant. Other challenges (e.g. gaining the right expertise, financial cost) do remain significant, but there are signs that these are being overcome.

There is help out there. The new UK BIM Framework - ukbimframework.org/ (launched by the UK BIM Alliance, BSI and the Centre for Digital Built Britain) provides guidance and information about the ISO 19650 series. In this year's survey, 81% of respondents reported that they need manufacturers to provide digital objects, and many are doing so. There are a plethora of new tools to aid digitization, and we have seen some significant shifts in the ways that people are working. In our first BIM survey, none of the tools geared to creating 3D models were used by more than 10% of respondents. Now, Autodesk's Revit is the main design tool for almost half of Technologists completing the survey, with 22% also using Graphisoft ArchiCAD. There are a wide range of providers of common data environments, model checkers and viewers. At NBS, we are pleased to be part of this landscape of technology platforms, with 72% of Architectural Technologist respondents using it. Recognising the trend toward cloud-based technologies, last year we launched NBS Chorus. Since lockdown, we have seen the use of Chorus increase significantly.

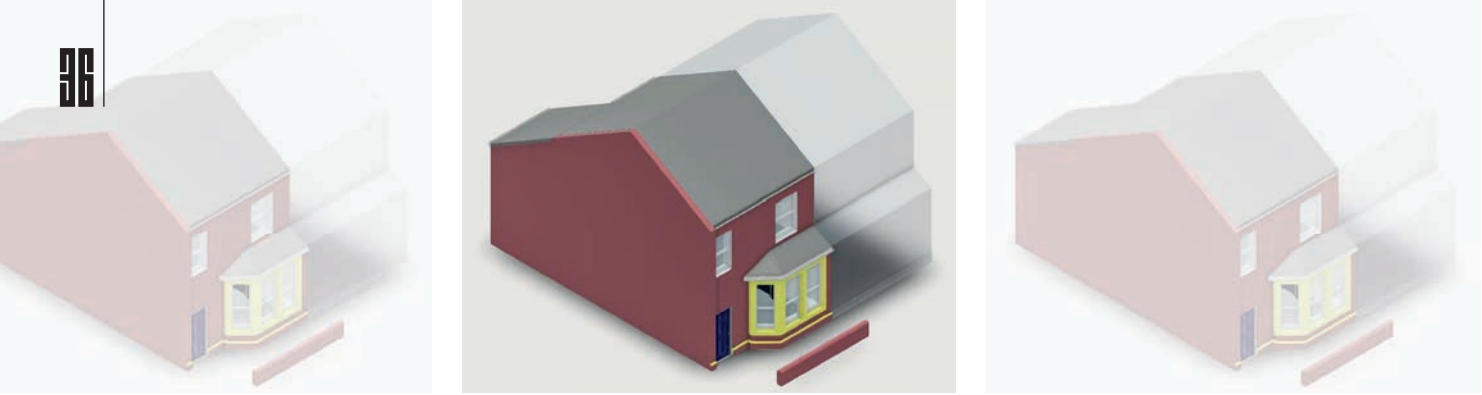
'There are new and useful tools coming out every day to help us automate and create smart design through algorithmic programs and software. Exciting to watch as things progress'.

When we collected data for the BIM survey, before COVID-19, respondents expected digitisation to change the industry, with 81% believing that it would transform the way they work. The current crisis is likely to have accelerated this change. Other factors, such as the new framework for Building Regulations (which requires a digital thread of information), are also likely to further drive the use of structured, well-managed information and the use of digital technologies in the construction industry.

You can download the full report, which includes supporting articles from industry experts comms.thenbs.com/bim-report-2020-at-journal.

NBS carried out an online survey between December 2019 and March 2020. The survey was widely publicised, including: email invitation from NBS, social media and PR activity by NBS, and promotion by over a dozen institutes and industry bodies. Responses were from Architectural Technologists, architects, BIM specialists, engineers, other consultants, contractors and project managers, amongst others. All organisation sizes were represented, as well as those doing private and public work, new build and refurb. People of all ages took part, and those in a range of design and information management roles. All UK regions were represented and some respondents were located outside the UK. ■

'Small firms cannot justify the expense, training, computers etc. and clients generally are not requesting it'.



There's no BIM like home Part 9

Words by Dan Rossiter BSC (Hons) MCIAT, Chartered Architectural Technologist

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 managing to produce my architectural floor plan drawing, I have started to look at my mechanical graphical model.

Around my home, there are several different heating products I need to register and capture within my information model. So, I thought I would try something different and attempt to use some manufacturer's objects instead of producing my own. Unfortunately finding suitable objects has proved rather difficult, however, I did manage to find a few boilers on the portals of each of the three most popular online object libraries: National Building Library (NBL), BIM Store, and BIM Object. Now to compare each of them to decide which I would use. Let the object library wars commence!

The rules

I went onto the portal for each of these online object libraries and searched for the term 'boiler' and selected the closest object available to compare against the requirements within my BIM Execution Plan. These objects were judged by the following categories based on the appropriate BIM Execution Plan specified BS 8541 Standards:

- BS 8541-1: Object Name
- BS 8541-2: Level of Detail
- BS 8541-3: Shape & Measure
- BS 8541-4: Attributes

Object name

BS 8541-1 specifies how to name objects. The name should include three fields separated by an _underscore, written using CamelCase:

- Source *(The library it was taken from or the manufacturer of the object);*
- Type *(Appropriate IfcType as included in the appendix of BS 8541-1);*
- Subtype *(Additional details NOT covered in the object's attributes).*

For an object name to be compliant I would expect to see something similar to: WorcesterBosch_Boiler_GreenstarSystems.

So, what names have been used? Shown below are the boiler names as they were downloaded. As you can see each object included a source, however, none of them used the IFC type or its predefined subtype or product/model name. In addition, both the BIM Store and BIM Object boilers include hyphens which are not permitted. The NBL boiler is the closest with three fields and CamelCasing, followed by BIM Store which began with the source, and finally, BIM Object last which began with a bespoke category.

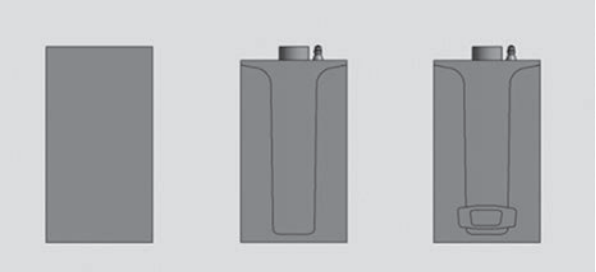
Source	File name	Rank
NBL	nbl_GasFiredCondensingBoilers_TopFlueSpigotConnector	1st
BIM Store	Worcester-GB162-Gas_Fired_Condensing_Boiler_Single-14	2nd
BIM Object	HVAC_Heaters_Baxi_Luna-Duo-tec-MP-plus	3rd

N.B. I am aware that each of these libraries has their own object standard. However, my EIR did not request these. My BIM Execution Plan needs to comply with the national standards.

Level of detail

BS 8541-2 specifies the need to be able to visually represent an object with three levels of detail: coarse, medium and fine. These levels of detail allow an object to show only relevant elements as required. For example, the detail needed in an assembly drawing would not need to be visible in a general arrangement. I'm pleased to report that each of these objects did incorporate these levels of detail; resulting in a three-way tie.

Source	Levels of detail provided	Rank
NBL	Coarse, medium and fine	1st
BIM Store	Coarse, medium and fine	2nd
BIM Object	Coarse, medium and fine	3rd



Here is the same boiler at coarse, medium and fine detail.

Shape and measure

BS 8541-3 specifies that product objects *(those that represent an actual product)* are required to have a coordinating level of detail. This means that the product should be visibly recognisable. However, it also warns about the dangers of excessive geometric detail, which can be seen in these objects. Here are two examples:

- Company logo
- Complex elements

As you can see below, these additional complexities have negatively affected the file sizes. With NBL again coming out best with the smallest file size by far for their generic boiler.

Source	File size	Rank
NBL	440KB	1st
BIM Store	1396KB	2nd
BIM Object	2344KB	3rd

N.B. The file size for the flue basket is 668KB, so this nested object alone takes up more memory than the whole of the NBL Boiler.

Level of information:

BS 8541-4 specifies that product objects, as defined earlier, should have both specification and assessment attributes. In addition, these attributes should be named in CamelCase and indicate the data type expected. Of the three boilers, only the NBL boiler followed BS 8541-4 fully by using CamelCase throughout its attributes. BIM Store are a close second, follow this convention only for attributes required to achieve BS 1192-4. While the BIM Object boiler does not include BS 1192-4 attributes or use CamelCase.

This means that once again the NBL boiler leads with its impressive use of CamelCase, with BIM Store second, and BIM Object third.

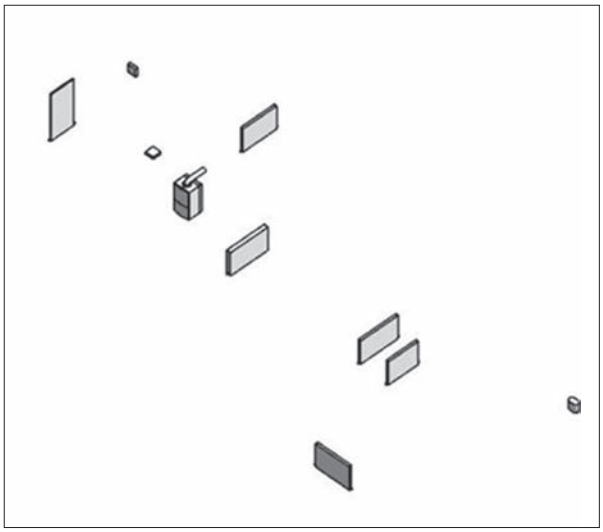
Source	Level of information	Rank
NBL	CamelCase for all attributes	1st
BIM Store	CamelCase only for COBie attributes	2nd
BIM Object	CamelCase not used	3rd

The conclusion

The winner, consistently ranking first in each category is the National Building Library! However, to be frank, none of these objects are ideal. For future product objects, it will be much easier for me to create my own. This is due to the limitations I have listed above as well as the fact that these objects cannot be easily configured to suit my needs. For example, for the Classification information to exchange into COBie I require it to be written into a field called 'ClassificationForObjects'. However, this property does not exist in any of the three boiler objects. In addition, there are a number of attributes I don't need that will have to be deleted such as the reference to other classification systems, as well as modifications to the geometry to lower the file size.

It has been heavily modified, but you can see the winning NBL boiler in my mechanical model.

I have now begun to make the necessary changes to create my final boiler object. This means that subject to ensuring that the correct product information is attached and the inclusion of a few extraction fans, I have now populated my mechanical model; therefore Plain Language Question PLQ2.4 is well underway!



N.B. This model does not have any pipework connecting my heating system together and nor will it. The majority of my pipework is not accessible, and as such, I have decided that I will not guess where they are located. Pipework has been excluded from the model until such time as its precise location can be determined.

Now I have a pretty strong architectural and mechanical models, it is time to look at some electrical objects.

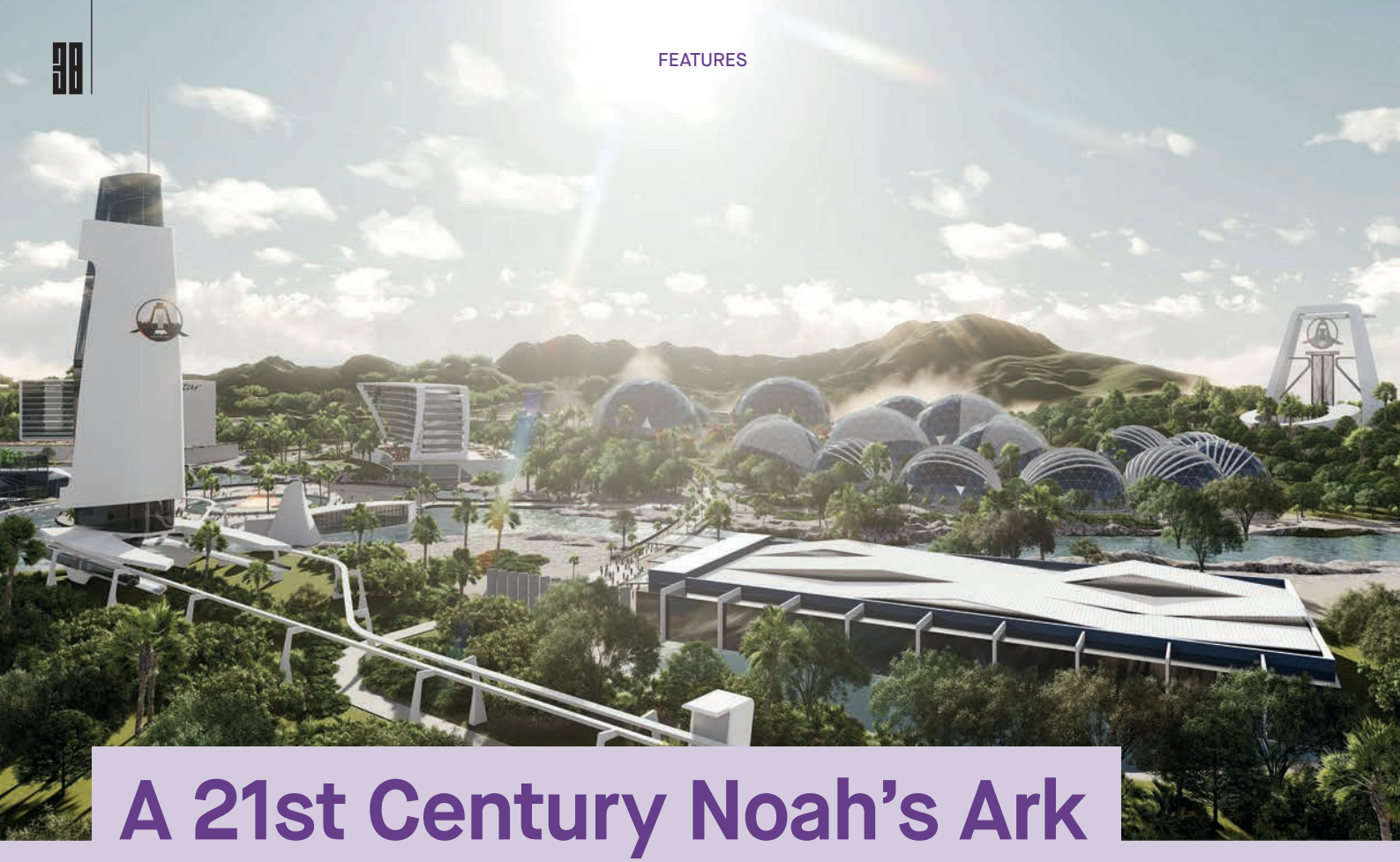
I have started to build my electrical model and wanted to discuss the importance of proper data formatting. I need to do so to ensure that when information is exported from my native authoring tool (Revit) into IFC, it is formatted correctly. As an active member of buildingSMART, I am a strong believer in open formats, and the importance of being open (BIM).

What is openBIM you ask? In short, it is the use of non-proprietary methods to deliver asset information. The non-proprietary method I'm referring to is Industry Foundation Class (IFC); think of it as the PDF of the built environment. No matter what software you use to make a document, if you convert it into a PDF it'll allow others to access this information without having purchased the software you used; this is what IFC achieves.

As IFC has a language (Schema), it comes with its own grammar (property sets) which includes acceptable words (properties) that can be used providing consistency and the opportunity for validation. For example, take my nest thermostat. Under IFC2x3 (the current recommended release) it is classified as an IfcSensorType and I can associate a number of standard property sets to this object to define it. *N.B. In IFC4 a thermostat is a IfcUnitatryControlType, but for the purposes of this blog I am sticking to the recommended release of 2×3.* ■

To be continued in the next issue.

@DRossiter87



A 21st Century Noah's Ark

Words by DBM Architects, South Africa

When Richard and Hein Prinsloo Curson first approached us with the idea of building a modern Noah's Ark we embraced the challenge to apply innovative architecture to serve a purpose for the planet itself. It is an interesting concept that architecture can somehow provide the spaces to conserve our natural world.

The park's first purpose is to stock and then protect the animal species that have survived the brutal and selfish actions of the human race. Immediately populate the park with species on the endangered list and create effective breeding programmes to eliminate the likelihood of their extinction. To undertake strategic research aimed at increasing the population growth of endangered species until they are able to be removed from the endangered species list. These include:

- Biological threats (Disease and exposure to man-made pollutants/biological contributors related to population deceases)
- Predatory threats (Animal)
- Poaching threats (Human)

To create effective measures to eradicate all human related contributing factors to population decrease and to strategically introduce endangered species into the natural ecosystem of the park on a regular basis.

To create non-profit organisations tasked with the sole purpose of eradication of human influence on population decrease for each endangered species via:

1. Conducting research into the actual nutritional value and the superstitious value of consumption of each endangered species.
2. The understanding of cultural beliefs associated to Nations that are primarily associated with the eradication of particular species of the animal kingdom.
3. To engage nations primarily associated with the eradication of a species via:
4. Scientific evidence and educational campaigns,
5. Legal enforcement via existing world organisations through lobbying and then,
6. The subsequent establishment of international law for non-compliant demographic of predatory nations or groups.
7. To install early age/development level awareness into future generations of the ecosystem that the human race shares with the animal kingdom; enlighten them around the senseless eradication of invaluable components of the plant earth ecosystem and to establish a firmly grasped understanding of consequences to themselves of missing components of the planet's ecosystem.
8. To create an experiential leisure-based visitor park that reconnects the (current and future) adults and children with the waning animal kingdom, and to grow the support base of the 'everyman' in the protection of a balanced ecosystem.

The site

- The Main Visitor Centre Complex: 20 to 30 square kilometres (site characteristic dependant)
- The Site Support Services Compound 10 square kilometre
- Entrance (Border) Compound 10 square kilometre.

The Geo Domes

There are fifteen Geo Domes in the park. Together they are Planet Earth as with sophisticated climate replication technology they each contain climates and natural environments from each corner of our planet.

Each of the three large domes at Noah's Ark are currently 230m in diameter – in other words each dome is equal to 75% of the Sandton City footprint. These may increase in size dependent on the consultations with animal experts. Currently these are the dimensions.

Sandton City Shopping Centre in Sandton Johannesburg, South Africa is rectangular – roughly 300m x 400m overall. In overall footprint it is roughly 120000m^2 on plan.

This is massively large. The minimum height of 90m on the large domes is already equal to a 30-storey building! There is no other dome in the world on this scale.

The combined footprint of the three large domes plus the twelve small domes is 3 x 42000 + 12 x 20000 = 246000m^2 on one level. This would equal to a total area of around 369000m^2 over 1.5 levels – or 3X the size of Sandton City.

Diameter and height of the Geodomes:

- Large domes (x3) - 230m diameter, 90m high, +/-42000 m^2 each
- Sub-domes (x12) - 160m diameter, 70m high, +/-20000 m^2 each

Type of climates in each of the domes:

There will be three main larger domes representing the three major climate zones:

1. Tropical
2. Temperate
3. Polar

In addition, there will be twelve sub-domes related to these – each representing one of the twelve climate regions:

1. Tropical wet
2. Tropical wet and dry
3. Semiarid
4. Desert (arid)
5. Mediterranean
6. Humid subtropical
7. Marine West Coast
8. Humid continental
9. Subarctic
10. Tundra
11. Icecap
12. Highland

Type of glass most likely to be used to build the domes

We anticipate using smart glass (or switchable glass) technology – in order to manage daylighting and heat gain. Smart glass is a glass whose light transmission property is altered when voltage, light or heat is applied. In general, the glass changes from transparent to translucent and vice versa, changing from letting light pass through to blocking some wavelengths of light and vice versa.

Three hotels within the park will allow visitors to stay and experience the vital work Noah's Ark science and conservation teams will be undertaking. This experience should thrill and enthuse visitors with a passion to look after our planet.

Number of hotel rooms and estimated size of public areas in the hotel

Positioning: 5-star
Minimum key count: 500
Total Size: 50000m^2
Public and Service Areas: 28000m^2
Room size: 40m^2
Positioning: 4-star
Minimum key count: 500
Total Size: 40000m^2
Public and Service Areas: 20000m^2
Room size: 36m^2
Positioning: 3-star/ Value
Minimum key count: 500
Total Size: 28000m^2
Public and Service Areas: 13000m^2
Room size: 30m^2

The park features the largest aquarium in the world.

Estimated size of other public facilities

The park features the largest aquarium in the world. It is to use water from the Indian ocean and its life support system includes pipes directly from the ocean circulating a water system to provide as a natural environment within the space.

The food court has five floors in front of an artificial waterfall connecting two sections of riverway. The court is designed to offer the experience of being immersed within nature; has surrounding open balconies and an electric gliding smart glass roof to enhance the experience of the environment it is positioned within. The roof can glide sideways so the top floor of the court is completely exposed.

The science facilities must lead world standards. A laboratory complex linked to underground bunkers to provide security storage for seeds and animal DNA samples. The facilities provide a one stop shop for scientists to manage and process DNA effectively re-creating animals should they be extinct. The architectural challenges are a fusion of visitor and science facilities so the two can work together in harmony.

- Water park - 40000m^2 site
- Entertainment centre - 10000m^2
- Conference centre - +/-20000m^2
- Food court – 12000m^2
- Bush spa - 2000m^2
- Aquarium - 40000m^2 site, 20000m^2 building area
- Visitor centre 25000m^2 ■

Joined-up thinking is key to building safely

Words by Nick Atkinson, Director, Ambar Kelly

To echo the wise words of the philosopher Erasmus, "prevention is better than cure". It is a phrase that pays, particularly when applied to designing a building's riser zone. Touching upon 18 different interfaces and providing vital utilities such as water, ductwork and electrics, a riser shaft is like an artery – an intrinsic part of any tall building. Although it serves an essential function, riser zone design is not taken as seriously as it should; meaning designers, contractors and the like expose themselves and others to risk, which can be avoided if the riser zone is given the attention it needs from the earliest point of design.

With the HSE's new building safety regulator able to oversee the safe design, construction and occupation of high-risk buildings, mitigating risk has never been so vital. Riser zone design is a key ingredient to eliminate risk in a building, yet why is its significance so frequently bypassed? More importantly, which implications does this have on the overall safety of a building?

Make riser zone design a priority

Look at any multi-storey building across the world and a riser shaft will be inside. Although a core component of every high-rise, riser zones are rarely designed efficiently. This is borne from differing beliefs in perceived responsibilities, the split approaches to writing specifications, and the disconnection between construction packages. The lack of focus on riser zone design is further compounded by the fact there isn't a category for riser zones within the system, Uniclass; astonishing when considering this is the industry's go-to classification used across design and construction.

Moreover, according to 'General principles of prevention' outlined in 'CDM 2015' *Managing health and safety in construction,* duty-holders, including designers, are instructed to avoid risk where possible when designing a building. Although a riser is part of an designer's principles of prevention, it is not being included in the blueprint, which means there are loopholes in this guidance. It leads to the conclusion that designers are failing to meet their legislative obligations by creating a govern-less hole within a building, which is a huge hazard when working at height. Designers might consider the walls, doors and floors around a riser, but in doing so they effectively create a shaft, which during construction also acts like a chimney in the event of fire. It is a risk highlighted in HSG 168 – Fire safety in construction, and the Joint Codes of Practice – Fire prevention on construction sites, but rarely mitigated by the designers in their design risk assessment, as required in CDM (2015).

Failing to consider this problem from the outset is a recipe for chaos. When constructed properly the design of the riser walls and doors will contain the spread of fire. However, by not specifying the type of flooring used at every level within a riser they may be significantly adding to the risk if the walls/doors have not been installed correctly. Or, as is more likely, they are modified as new commercial or domestic tenants come and go, amending the M&E services that enter their domain from the riser without adequately replacing the fire seal. Furthermore, other functions that interface the riser zone can cause difficulties in closing off paths for fire. Although designers might believe they have contained risk, they are actually adding to it.

It goes without saying that riser-related issues should be addressed at the design stage, so that fire can be contained if and when it occurs. 'Joined-up thinking' therefore is essential, particularly when applied to construction. It displays a visionary-like ability to implement complex and fragmented plans, resulting in buildings that remain safe and long-standing. This is best achieved by designers taking a holistic approach to a structure's design, and that means factoring in details such as the riser flooring, which too often falls through the gap in their professional thinking.

What are the options?

Glass Reinforced Plastic (GRP) grating is generally seen as a safety solution to prevent people falling through holes, but how effective is it? There are three basic resins that are used to bind the glass fibre strands to form GRP: Orthophthalic (Ortho) resin; Isophthalic (Iso) resin, and Phenolic resin. Ortho resin GRP is the cheapest entry-level GRP which readily burns. Iso resin GRP grating is said to meet BS 476-7, the regulation relating to the measure of the surface spread of flame, but only in flat sheet form, tested vertically (so grating cannot meet that test).

However, when installed in a riser's chimney-style environment, Iso GRP grating is found to be extremely flammable, a dormant fuel cell. This makes the BS 476-7 classification unsuitable for its use within a riser zone. Neither Ortho nor Iso GRP grating is used on offshore oil platforms or the London Underground for fire and smoke reasons, yet it is readily used in high-rise construction. Surely, if we are paying more than lip service to the risk of fire shafts, then either Phenolic GRP (identifiable, as it is red/brown in colour) or steel maintenance platforms should be used.

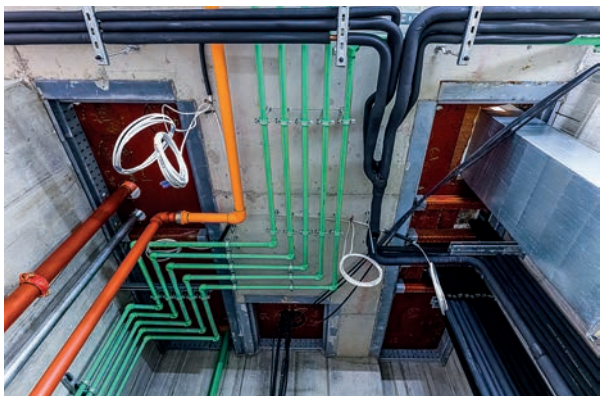
If a main contractor decides to use GRP grating as the maintenance flooring and installs it, it adds to a building's smoke and fire loading in both its under construction and final state. It is absolutely crucial, therefore, that the appropriate materials are specified to prevent falls and maximise occupant safety in the event of a blaze. You may question why the main contractor has decided on the maintenance flooring. The answer is simple: because no one in the design team has considered anything else.

There other issues with GRP, some of which relate to a lack of understanding on its properties. Installers will often over-cut it when installing mechanical, electrical or plumbing services within a riser shaft. This weakens the GRP, causing it to lose its integrity. To compensate, steel beams are often used to bolster the area beneath the GRP; a lengthy and potentially perilous process involving working from height off scaffolding, and some form of fall arrest such as a handrail.

Riser safety in action: One Crown Place, London

One Crown Place is a mixed-used development which features two residential towers located over a six-storey office podium. On the One Crown Place project, the Mace Construction/Mace MEP teams required a system that would help manage the many risks and challenges faced with the buildings' risers. One of the challenges faced during the construction of the project was the risk of falls from heights in riser shafts that required fire walls passing through them and horizontal fire protection. To eliminate this risk, the team specified RiserSafe® from Ambar Kelly, a full riser management system which combats many construction-related issues including eliminating the risk of falling from height.

Mace worked with Ambar Kelly, who provided a total of 729 of its RiserSafe® units, which accommodated all interfaces associated with the concrete frame, steel frame,



M&E services, dry wall and blockwork. The bespoke units were simply cast into the structural floor slab, forming and protecting the hole in one action. This approach eliminates risks associated with working at height and the spread of smoke and flame.

This type of riser solution removed the need for riser shaft management tools such as permits, daily inspections of scaffolding and temporary fire doors. The offsite co-ordination reduced onsite subcontractors' time and cost, and contributed to removing the intense day-to-day management on site to ensure operatives were working in a safe environment, and projects could be delivered efficiently. The cost-effective system saved the project over £300k due to eliminating alternative work, materials and processes required to protect the riser shafts during construction.

HSE standards indicate that buildings over 18m must have sufficient horizontal compartmentation every 10 floors to prevent the movement of smoke and flame rising through the shaft, up and down the building. A product such as the likes of RiserSafe®, which has been fire tested by the BRE, has a steel floor plate on top which acts as a horizontal fire barrier to the spread of smoke and flame on every level that it is used. If there is a 50-storey building with a unit cast in at each horizontal floor, fire cannot spread as there is a solid steel durbar plate sitting on top, blocking its path.

The construction industry needs to incorporate fire resistance into fall protection decisions, looking at each project holistically to account for all the variables. By designing the riser zone, multiple benefits can be reaped and many risks can be eliminated. If efficient measures are employed to fill in the riser void, then frankly there is no risk of workers falling from height. Although this might seem a simple message, it still needs to be reiterated and circulated around the industry. If the riser zone is a core part of a safe, efficient building then how long will it be before it becomes a core factor in building design? With some joined-up thinking and a holistic approach taken by architects, the question of 'Who's responsible for the riser?' will go some way to be being answered. ■

Qualifying as a Chartered Architectural Technologist, MCIAT remotely

If you are looking to utilise your time you can progress as a Chartered Architectural Technologist and the process is completely remote! Your Professional Assessment Interview is held via Zoom and the current turnaround is swifter than normal.

Steps to qualify remotely:

1. Complete the MCIAT Professional Assessment and reference your supporting evidence. It must be supported by a Referee (MCIAT, ARB, MRICS, MCIOB, MCABE etc.) and you must be an active Associate member or profile candidate to apply.
2. Submit the MCIAT PA application with evidence via Dropbox, WeTransfer, Google Drive (or alike) to membership@ciat.org.uk and pay the £350 assessment fee.
3. The Member Panel will review the MCIAT PA application and with the outcome of pass, defer or refer. If you are deferred and asked for further evidence, we will provide guidance to support.
4. Once passed, we will arrange your Professional Assessment Interview via Zoom.

A selection of completed exemplars, PA form to complete, Professional Standards Framework and candidate guidance notes can be found here: shorturl.at/cGX34

For any queries or assistance required, please do not hesitate to contact the Membership Department:

James Banks, Membership Director – **james@ciat.org.uk**

Dorota Fitzpatrick, Assistant Membership Director – **dorota@ciat.org.uk**

Megan Brown, Membership Administrator – **megan@ciat.org.uk**

CIAT

CIAT Registered Practice wins Award

Words by Usman Yaqub BSC (Hons) MCIAT, Chartered Architectural Technologist

Studio Yaqub, a CIAT Registered Practice, has won the RICS Social Impact Awards 2020, South West, under the category of Commercial. The Awards recognise the built environment's positive and transformational contribution to society.

... a great concept which has been made a success by a team of dedicated professionals who have driven the project...

The Award was for the practice's work with Bristol Spaceworks which is a not for profit organisation which was established 25 years ago. Bristol Spaceworks' main purpose has been to target one of the most socially deprived areas in Bristol (Inner East Bristol) and provide start-up, micro and small business offices, workshops and artist studios along with key facilities. Together with office support, the aim is to create a supportive environment enabling new and established businesses to thrive and grow. They maintain six sites across Bristol with a clear focus on improving deprived areas.

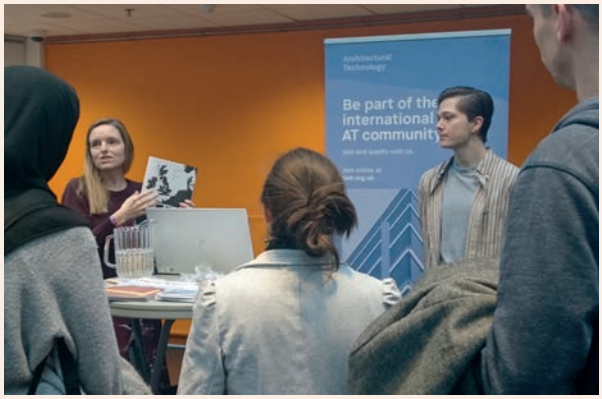
Studio Yaqub has been involved for a number of years with Usman Yaqub MCIAT acting as a Director on the board amongst other key specialists. Together they help steer and inform a clear route to develop the business and fulfil its key objectives to build a strong local economy. They provide input on areas of expertise from architectural, construction and business and have also provided professional services with the most recent work reimagining an external breakout space at the main site.

The judges said "Spaceworks' is not an individual scheme but a concept of providing affordable, flexible office and workspace for people in the area. We viewed three buildings, all completely different and all achieved the scheme concept in different ways. With occupants as varied as a group of Somali's who provide high quality social care cross community and with a commitment to breaking down barriers to a group of artists to a Pentecostal Christian Church. Not a grand scheme but a great concept which has been made a success by a team of dedicated professionals who have driven the project many from the beginning." ■

Online mentoring can help members succeed

Words by James Evans, Communications & Digital Administrator

If you were asked to think about AT professionals 'networking' then you might picture them sharing a drink at the AT Awards, chatting at our AGM or swapping tips for winning clients at a CPD session. If you were asked to think about mentoring, the image of a seasoned MCIAT stooping over a recent graduate's desk to give them feedback on their Professional Assessment or POP Record might spring to mind.



All of these things are now taking place online (and have been for some time) via CIAT's MentorMatchMe platform.

MentorMatchMe helps members to receive independent advice from someone who's 'been there before'. Mentors can provide guidance on career trajectory, developing a specialism, identifying strengths and overcoming non-technical professional challenges.

> I'd really encourage other people to sign up for it if they haven't already.

For Dr Suha Jaradat, a seasoned academic and lecturer at Edinburgh Napier University, it was the place where she went for advice on securing her Chartered Membership.

Upon joining, Suha scoured a list of potential mentors to find someone she could relate to. She stumbled upon Paula Bleanch's page. Paula had lectured at Northumbria University and was keen to help academics like herself. Suha tentatively contacted her and asked if Paula would consider mentoring her. To her delight, Paula said yes.

The pair arranged an online meeting and quickly got to know each other.

"We had similar expectations" Paula told me. They were both busy academics and decided to meet once a month via Zoom. The MentorMatchMe platform ensured that neither of them would be underwhelmed or exhausted by the process. "A really good thing about the MentorMatchMe platform is that it asks you to set really clear goals from the start about what you want to do and how much time is going to be involved" Paula said.

Suha found the mentoring very useful. Paula had "a lot of useful advice and guidance" and setting realistic targets "kept [her] focussed". The process also boosted her confidence. When I spoke to Suha she used the word "empowering" several times over. She gave the example of Paula sending her an encouraging email the day before her professional interview. "These little things are valuable ... you feel like there's someone who believes in you."

Paula didn't have a mentor to help her gain her Chartered Membership but had been mentored earlier in her career. She described mentoring as her way of "paying it back" and described the process – through which she helped Suha achieve her goal - as one that gave her "an incredible sense of satisfaction"'.

After just five months of mentoring, Suha passed her Professional Interview. She is now a Chartered Architectural Technologist.

Suha was delighted and is "happy to be part of this community". She wants to encourage her own students to become part of the profession and feels that her MCIAT status gives her "credibility".

When Paula found out that Suha had passed she was overjoyed. "It made me feel like a million dollars" she told me. She described Suha as "a real asset".

Paula believes that mentoring could help more females gain their Chartered qualification. When we spoke, she noted that there is a significant drop off between females studying Architectural Technology and females who ultimately become Chartered Members. Having the support of somebody else saying "I've been there, I've done it" could be vital, she told me.

Paula was full of praise for the MentorMatchMe platform. "Since it's been introduced it's got better and better" she said. "I'd really encourage other people to sign up for it if they haven't already."

Given that she'd had such a positive experience I was keen to find out if Suha would consider mentoring anyone herself. "I've already signed up" she said!

Visit ciat.mentormatch.me to find out more. ■

First CIAT Accredited apprenticeship offered by Edinburgh Napier University

CIAT has Accredited its first ever apprenticeship programme at one of its Centres of Excellence.

Edinburgh Napier University is the first higher education institution to have its apprenticeship programme Accredited by CIAT. The University was the first educational establishment in the UK to offer an apprenticeship in Architectural Technology and has now been awarded Accredited status for its Construction & the Built Environment (Architectural Technology) Graduate Apprenticeship.

A Graduate Apprenticeship (GA) is an alternative route to graduate-level education in Scotland, providing a 'workplace-learning' environment and the opportunity to work in partnership with the built environment industry. A GA aims to produce graduates with the skills, knowledge and behaviours to make a valuable contribution in the area of their chosen degree pathway.

The Construction & the Built Environment (Architectural Technology) GA is four years in length and Graduate Apprentices will spend approximately 80% of their time in paid, full-time employment.

Graduates will be eligible for Associate membership, ACIAT and will also be entitled to exemptions against Educational Standards of the MCIAT Professional Assessment when progressing to become a Chartered Architectural Technologist, MCIAT.

This initiative further emphasises the value that our profession adds to the industry...

Dr Matthew Brooke-Peat MCIAT, Vice-President Education, said "I am pleased that the first educational establishment to offer an apprenticeship programme at degree level in Architectural Technology has also achieved CIAT Accreditation for their provision. This initiative further emphasises the value that our profession adds to the industry, and that employers are committed to ensuring their staff have the necessary skills and knowledge. I look forward to many more institutions following suit in the near future."

Programme Leader for the Architectural Technology programmes, Dr Suha Jaradat MCIAT added that "Edinburgh Napier aims to be a University that is professional, ambitious, innovative and inclusive. The provision of Graduate Apprenticeships in Scotland's workplace is a key Government policy and offers an alternative route to a graduate-level education. Built on the success of existing Foundation and Modern Apprenticeships, Graduate Apprenticeships provide an exceptional 'workplace learning experience'."

Graduate Apprenticeships, are developed by Skills Development Scotland, by way of consultation with employers, universities, professional bodies and through the deliberations of Technical Expert Groups. The Graduate Apprenticeship delivered by the School of Engineering and the Built Environment offers just such a workplace learning experience for those employed in Architectural Technology.

Dr Jaradat continued, "The Graduate Apprenticeship programme proved to be popular with employers and students who will be offered the opportunity to study for a degree while working in the industry which will also be good for the profession of Architectural Technology. Strong links with employers have been established and careful checks are made to ensure that employers are appropriate and support is established to all students via their academic and industrial tutors."

For more information on apprenticeships in Architectural Technology, please visit ciat.org.uk/education/apprenticeships.

Construction and engineering skills set for City Region Deal boost

Over 2,000 people in south east Scotland are set to benefit from the first wave of skills and career support from the new Housing, Construction and Infrastructure (HCI) Skills Gateway.

Supported by the Edinburgh and South East Scotland City Region Deal and funded by the Scottish Government, the HCI Skills Gateway will provide multi-level support to schools, new entrants to the sector and upskill the existing workforce. The HCI Skills Gateway includes an exciting and diverse range of short work-ready courses in renewable energy for homes, installing electric vehicle charging points, highways and roads infrastructure, environmental technologies and engagement with school pupils.

The HCI Skills Gateway is being delivered by the region's universities and colleges. Professor Sean Smith of Edinburgh Napier University, who leads the HCI Skills Gateway, said "This is the start of a step change in support across the region to enable and support our future workforce and net-zero ambitions." ■

AGM 2020: Remote meeting

To ensure compliance with both the COVID-19 regulations and the Laws of the Institute, CIAT will be holding a virtual AGM.

Notice of the Annual General Meeting 2020
Notice is given that the Annual General Meeting of the Chartered Institute of Architectural Technologists will take place via an online platform on Saturday 14 November 2020 for the following purposes:

- To consider the Annual Review.
- To consider the accounts and balance sheet as at 30 April 2020.
- To re-appoint the Auditors and authorise Council to fix their remuneration.
- To receive and debate the Resolution(s).
- To announce the results of the election of members to the Council and Regional and Centre Committees.

Francesca Berriman MBE HonDTech
Chief Executive
June 2020
CIAT, 397 City Road, London, EC1V 1NH, UK

FAQs

What is the AGM?
The Annual General Meeting (AGM) is the yearly business meeting for the Institute, which is required to comply with the Laws of the Institute (please see the formal notice published here).

Where is the AGM being held?
Due to the ongoing (and unknown) restrictions on physical gatherings due to COVID-19, the Executive Board agreed that the 2020 AGM will be held via an online platform to facilitate the meeting.

Who attends the AGM?
The meeting is Chaired by the President who is supported by the Honorary Secretary, Honorary Treasurer and Vice-Presidents. Each Region/Centre has representation at the AGM, which is its Councillor and Voting Delegates, who have been elected to represent the membership by the Regional/Centre Committee. Non-members who attend are the Auditor, to present the accounts, the Chief Executive and support staff.

Can I attend the AGM?
Any member can attend the AGM but you must register your attendance. As a member you may take part in any debate but cannot vote. The vote has been delegated to the Voting Delegate from the member's Region/Centre.

How do I register to attend?
Please register your attendance by completing the Eventbrite registration which can be found here: ciatagm2020.eventbrite.co.uk

If I am a Past Chairman or President, do I still need to register to attend?
Yes, Past Chairmen and Presidents will be invited and will need to register to attend the AGM.

Will I receive papers for the meeting?
All members who have registered to attend the AGM will receive a set of papers electronically before the meeting takes place.

How is the vote taken?
Only Voting Delegates can vote and they are voting on behalf of their Region/Centre, as delegated by the Regional/Centre Committee. The vote will be via an online platform to ensure that the vote is recorded fairly and correctly.

How is my vote represented?
Your vote is delegated to your Regional/Centre Committee. You will need to contact them directly and details can be found here: ciat.org.uk/membership/regions-centres-aspiration.html

How are the Voting Delegates elected for my Region?
In the first quarter of each year, the Chief Executive advises Regions on the number of Voting Delegates they are entitled to elect to represent the view of their Region. All Voting Delegates must be Chartered Members and all Chartered Members in the Region must be informed of the election of Voting Delegates to ensure fairness.

As agreed by Council, the breakdown is based on membership as at 1 March in any year. A Region is entitled to:

Member numbers	Voting Delegates
100	1
100+	2
350+	3
700+	4

How are Voting Delegates elected for my Centre?

In the first quarter of each year, the Chief Executive advises Centres on the number of Voting Delegates they are entitled to elect to represent the view of their Centre. All Voting Delegates must be Chartered Members and all Chartered Members in the Centre must be informed of the election of Voting Delegates to ensure fairness.

Centres 01 and 03-07 elect one Chartered Member who will have the necessary number of votes according to the Centre's membership, with, where appropriate, multiple votes.

The Republic of Ireland Centre's number of votes is based on the Regional model and will have its number of Voting Delegates based on the member number in the Centre.

What are the Resolution(s)?

The AGM will receive and debate the Resolution(s) put forward, these are typically changes to the Laws of the Institute.

What is the process for Resolution(s) for consideration at an AGM?

Regions/Centres who wish to table a Resolution(s) for consideration at the AGM must submit their Resolution(s) in the prescribed format to the Chief Executive in line with the timetable issued to the Region/Centres in the first quarter of each year. For this year, the deadline is 28 August 2020. For further information please contact the Chief Executive's Office, joanne@ciat.org.uk.

The Chief Executive will receive and present the necessary papers for Council's consideration, in consultation with the Regional/Centre Councillor, and the Council will take a decision on whether to place the matter before the AGM, as an Institute Resolution and handled in the same way as any other Council recommended Resolution.

Individual members, other than members of the Regional/Centre Committee, also have the right to put a proposal to be considered at the AGM. Any such member may approach their Regional/Centre Committee for consideration of their views. The member should be invited to the Committee meeting for that specific item of business. If endorsed by the Region/Centre Committee, the proposal would then become a Region/Centre submission. This must also be on the prescribed format.

Alternatively, the member may approach the Chief Executive direct with a request for a proposal to be considered. The Chief Executive issues the notice of an AGM together with the timeframe for submitting Resolution(s) for an AGM in line with the Laws of the Institute.

When are the Resolution(s) published?

The Resolution(s) are published in September following the autumn Council meeting. These are circulated with the *Annual Review* to all members, with the autumn issue of *AT Journal*.

Will the AGM return as a physical meeting in 2021?

Yes, subject to the COVID19 and regulations around public meetings, the AGM should be a physical meeting in 2021, with networking opportunities.

If your question has not been answered please contact the Chief Executive's Office by emailing rochae@ciat.org.uk ■

Elections in September – nominees standing

In the spring issue of *AT Journal*, we showcased the manifestos for those standing for election at Council in September.

Here is a reminder of the positions and the candidates standing:

President Elect
Kevin Crawford MCIAT

President Elect
Paul Laycock MCIAT

Honorary Treasurer
Doug Fewkes MCIAT

Vice-President Technical
Steven Hedley MCIAT

Candidates gave a presentation at the Council meeting held on 7 March to Regional and Centre Councillors to support their manifestos and to allow the opportunity for questions. We encourage you to liaise with your local Region, Centre or aspirATion about these. The full manifestos can be read on the website at: ciat.org.uk/about/honorary-officer-elections/manifestos-2020.html

If you would like to pose your own questions to the candidates or would like to find out more from them, there are two hustings to be hosted by the Institute during June and in July – further details on these will be sent out in AT Weekly and across our social media channels. Do not miss these opportunities to be able to speak directly to those standing for election.

The campaign trail continues and here is a summary of the key dates:

Campaigning by candidates including hustings:
Now – 3 September 2020 inclusive
Election ealerts and updates on the website:
Now – 3 September 2020 inclusive
Election at Council:
5 September 2020
Candidates advised if not in attendance at Council
Ealert announcing the election results:
7 September 2020
Assumption of position:
14 November 2020, close of 2020 AGM

Membership news

Chartered Members

We would like to congratulate the following members who successfully attended their Professional Interview and are now Chartered Architectural Technologists, MCIAT:

022943	Michael Carr	Yorkshire, 02
026708	Nathan Saulle	Yorkshire, 02
021886	Katie Brown	North West, 03
019074	David Parkinson	North West, 03
027432	Reece Roberts	North West, 03
020107	Andrew Glasby	East Midlands, 04
034260	Simon Plant	East Midlands, 04
034290	Michelle Budd	West Midlands, 05
033799	Simon Wall	West Midlands, 05
029086	Anees Zaman	West Midlands, 05
024236	Tom Hillier	Wessex, 06
032775	Samuel Latham	Wessex, 06
023894	Paul Cramphorn	Central, 08
029792	Florin Escaru	Central, 08
031076	Ryan Haggerty	Central, 08
019278	Leo Maggs	Central, 08
033333	Luca Silvestrin	Central, 08
034794	Ruaridh Wainwright-Harrower	Central, 08
027537	Ashley Busby	Greater London, 09
030266	Mihails Cernaks	Greater London, 09
031000	Martin Lee	South East, 10
033077	Joe Murray	South East, 10
019866	Sepideh Shahla Zadeh	South East, 10
028800	Thomas Cushing	Western, 12
034693	Neil Hubbard	Western, 12
028679	Robert Nickels	Western, 12
0000580	Suha Jaradat	Scotland East, 14
034717	Sherif Eladly	Middle East & Africa Centre, C7
034186	Renil Mathew	Middle East & Africa Centre, C7

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

001874	Jack Eagle	East Anglia, 07
000257	Bryan Lemmon	East Anglia, 07
027001	Ewan Lyons	Scotland West, 13

Republic of Ireland news

Home Energy Grants
The SEAI (Sustainable Energy Authority of Ireland) provides a number of grants for home owners/house builders for the installation of energy saving measures and systems. Full information on the grants and the process of claiming them may be found on the SEAI website, please see: seai.ie/grants/home-energy-grants/

Conduct
Member 028312 – Surinder Buray
Mr Buray was found in breach of Clause 1b) from the *Code of Conduct* effective 1 May 2014:

Clause 1: Professional Conduct
The members shall at all times:
b) act faithfully and honourably in their professional responsibilities.

Disciplinary action:
In accordance with the Conduct & Disciplinary Procedures Item 18c), Schedule of Disciplinary Action, Mr Buray is to be excluded from the Institute for a period of one year in respect of the breach of Clause 1b) from the *Code of Conduct* effective 1 May 2014.

Publication of disciplinary sanctions on the website

The Conduct Committee has agreed that disciplinary sanctions will be published on the website and will remain for the following periods:

- Reprimands – six months
- Exclusion - for the length of the exclusion period plus six months
- Expulsion – five years

Such publication will enable potential clients to establish whether the member that they are about to instruct has a previous disciplinary sanction recorded against their name. There is a corresponding benefit for other members who can check on a member's record of disciplinary sanctions before involving that member in a joint project, consultancy or employment. It was deemed fair that members who had not had a sanction against them were distinguished from those that had had a sanction issued against them.

An example, which assisted the Committee make this decision, was if a person were caught speeding, the endorsement would be on their driver's licence for three to six years. If it were an insurance claim, it would be on the records for five years and would have to be disclosed. Other professional organisations tend to have publication periods of three years so the periods here are much shorter in the case of reprimands and exclusions. Publication for the periods agreed by the Conduct Committee is not considered to be unreasonable in all the circumstances. It is both in the interests of the public and other members.

In coming to its decision, the Conduct Committee had taken into consideration the Institute's duty as a Chartered Body and its obligations to protect the public, whilst ensuring its members are treated fairly.

AT CPD Register Directory
brought to you by

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

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-fireinvestigation-and-the-design-of-buildings

Fire Safety for ACM
This CPD seminar will educate designers post-Grenfell about what is and is not combustible in line with Approved Document B.

The intended audience is anyone wanting to understand how to select non-combustible external cladding.

Cost/fee for attendance: Free
Contact: Mark Winstanley
E: mark.winstanley@3acomposites.com
T: 07584680263
alucobond.com

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-andcompartmentation

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

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

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

Inclusive Environments
The Inclusive Environments programme at Design Council aims to raise awareness about the importance of designing places that meet the needs of the diversity of people who want to use them.

The course is a free and interactive online training course that provides an introduction to inclusive design relevant to all built environment professionals. It has been developed in partnership with the key institutes and experts on Inclusive Design across the UK to help enable built environment professionals understand and apply inclusive design to the creation of new places.

Each module takes approximately 20 minutes to complete. Upon completion of the course, a certificate from Design Council will be awarded.

inclusive.designcouncil.org.uk

Leadership and Professional Development
A series of one-hour webinars covering various aspects of leadership and professional development.

Cost/fee for attendance: £42.50
(15% discount for CIAT members – use code CIAT15)
bre.ac/course/leadership-professional-development-webinar-bundle/

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

The Future of Offsite Construction
BRE Associate Director of Construction Innovation, John O'Brien, describes the thought process behind the ZedFactory's ZedPod at the BRE Innovation Park in this engaging one-hour webinar.

Cost/fee for attendance: £10.50
(includes 15% reduction for CIAT members – use code CIAT15)
bre.ac/course/future-offsite-construction/

Enter AT Awards | Students – deadline extended until 4 September 2020

Designed to recognise excellence in Architectural Technology globally, the AT Awards | Students are open to students, whether they are based nationally or internationally.
They comprise of two categories:

- Student Awards | Project
- Student Awards | Report

Full details and the application forms can be found on the website. Winners will be announced at the virtual AT Awards event on 3 December 2020.

The AT Awards are recognised as the premier accolades that demonstrate outstanding achievement in Architectural Technology and celebrate the technology of architecture.

AT AWARDS

ciat.org.uk/awards.html
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