aspirAT ion

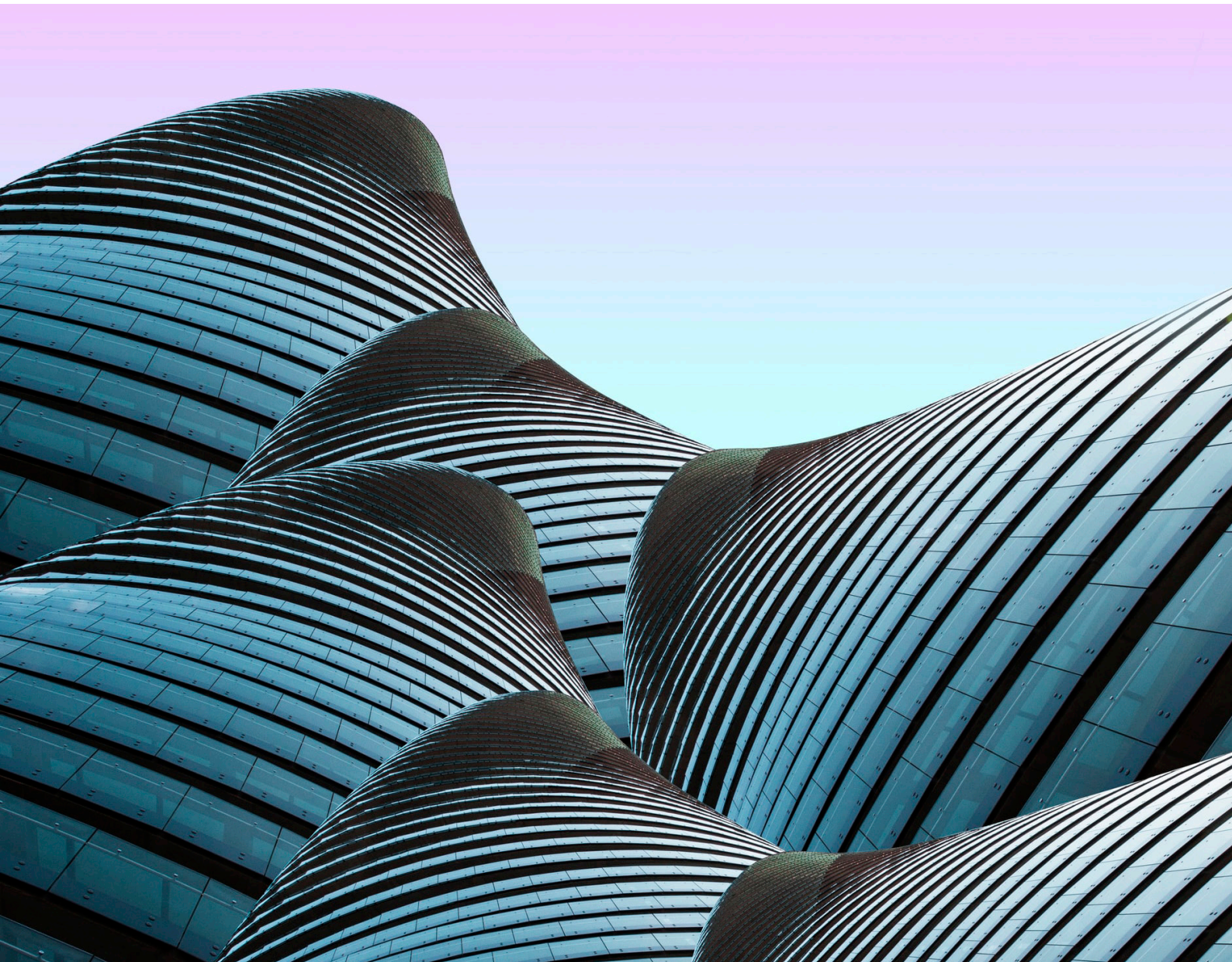
The e-magazine for aspiring
Architectural Technology professionals

Issue 12
Spring/Summer 2021

AT Awards
Winners 2020

How to:
Perfect your portfolio

Reflecting on tech–
What's in the toolkit?



A word from the Editors

Spring is here and so too is the spring/summer edition of aspirATion magazine! We're pleased to be bringing you another issue of insightful features, guidance and support to aid you in your studies, at work and as you develop your career.

As another academic year draws to a close for those of you studying, this issue features an excellent piece from Chartered Architectural Technologists at architecture and design practice Stride Treglown, on perfecting those portfolios for prospective job opportunities. Following this theme, recruitment experts Hays share their eight tips for a successful job interview.

It is also time to start thinking about upgrading your student membership with CIAT. The Institute is here to support you further with your career and professional development as an Architectural Technology professional after you graduate. You can read more about what this entails and how to upgrade on page 18.

We speak to our 2020 Winners of the AT Awards| Students. The 2021 AT Awards opened on 1 February. Be inspired by the projects and reports featured on pages 10-15! This year includes a new category; the Emerging Talent in the Technology of Architecture, for excellence in the technology of architecture for those in the early stages of their career in AT. To find out more on the 2021 AT Awards visit architecturaltechnology.com/awards.html.

Both the University of Derby and University of Westminster showcase what their AT students have been up to in the last year, Cath Basilio from Sheffield Hallam University discusses questions around recruiting graduates during the pandemic, an international competition winner gives us an insight into his winning entry, and much more.

As always, please get in touch as we always love to hear from you regarding ideas for future articles, profiles or features, as well as anything in this issue – this publication is for you and is your chance to have your voice heard, share your experiences, successes, and tips among other things.

Happy reading

April McKay and Jitka Jouklova
Editors

Front cover image:
Canary Wharf, London, UK
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Get in touch if you have any feedback, ideas or content for the next issue.

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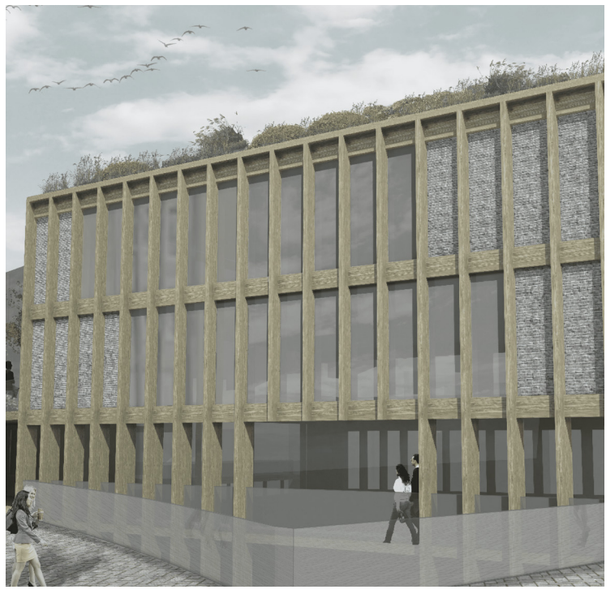
In this issue...



aspirATion

The network supporting and developing aspiring professionals.

Find out more about aspirATion and how to get involved...

What is aspirATion?

aspirATion is a forward-thinking and inclusive community of CIAT members and affiliates, made up of students, graduates and newly qualified professionals which provides the opportunity and support for aspiring professionals to develop and grow, all the while inspiring the next generation of Chartered Architectural Technologists. It is the gateway into furthering your career within the discipline.

What does aspirATion do?

One of aspirATion's main aims is to welcome and assist students, graduates and newly qualified members and affiliates into the profession. aspirATion Groups host events such as site visits, practice interviews, networking events and social gatherings on a regular basis. In the current climate, these events are taking place virtually.

aspirATion offers much more than just events however – aspirATion Groups engage regularly with schools and universities through presentations and careers fairs, helping to encourage the professionals of tomorrow into the sector. aspirATion collaborates with other groups within the built environment such as Novus (Chartered Institute of Building), Matrics (Royal Institution of Chartered Surveyors), YEN (Chartered Institution of Building Services Engineers) and FAN (Royal Institute of British Architects).

aspirATion Group committee members at the Presidents' Ball 2019 in Glasgow

Why get involved?

With the aspirATion network growing and gaining more traction, the reasons for you to participate are better than ever. There is something for everyone in aspirATion. You may simply want to come along and meet some of your fellow Architectural Technology colleagues, maybe attend one or two CPD seminars, network at an event or seek some support. The continued success of aspirATion relies on new members and affiliates getting involved, attending events and sharing their views.

You can get involved by joining up with your local Group and encouraging your fellow students or colleagues to do so. There are opportunities to attend a variety of events, or even be more proactive and write articles, give presentations and arrange events on behalf of your local Group.

How can you get involved?

It is very easy to get involved and there are many ways of doing so. If you know a Region/Centre Committee member, Programme Leader or aspirATion member, find out about when the next event, CPD or meeting is taking place, and introduce yourself.

You can also contact our Education Department at Central Office by email **education@ciat.global** or +44 (0)20 7278 2206. The team will be more than happy to introduce you to your Region/Centre Committee as well as your aspirATion Group. Get in touch and become involved with aspirATion and CIAT! ■

Find out more about how aspirATion is structured, who contributes, and its current Group Chairs by visiting **architecturaltechnology.com/aspiration**

aspirATion Group: Current opportunities

aspirATion Groups currently have opportunities for the role of Chair in:

- Scotland West Region
- Republic of Ireland Centre

The Chairs work with the established Regional/Centre Committee, educational establishments running CIAT Accredited programmes, colleges, peer groups such as neigbouring aspirATion Groups, members of BRE Academy, CIOB Novus, RICS Matrics, FAN, YEN, and industry professionals within CIAT's Regions/Centres to organise events,which include socials, CPD or site visits.

If you are interested, please submit a personal statement outlining what you could bring to the role of Chair relating to the aspirATion Group terms of reference:

- Engage with and increase the potential for participation among current students, graduates, Associates and affiliates and recently qualified Chartered Architectural Technologists.
- Exchange ideas for the promotion of Architectural Technology and discuss ways to support current and future members and affiliates as they embark on their career in Architectural Technology.
- Work collaboratively to promote the Institute including its initiatives, activities, objectives and constitutional processes to potential AT professionals and other associated professions.
- Promote Architectural Technology as a career of choice.
- Provide a focal point for the Institute's activities and objectives relevant to aspiring Architectural Technology professionals, and recently qualified Chartered Members.
- Maintain a dialogue with the Institute's other Groups and Committees regarding issues that may affect aspiring Architectural Technology professionals and recently qualified Chartered Members.
- Be the link between the Region/Centre aspirATion Groups and Central Office.
- Report to Council on the activities of the Committee and the Region/Centre Groups.

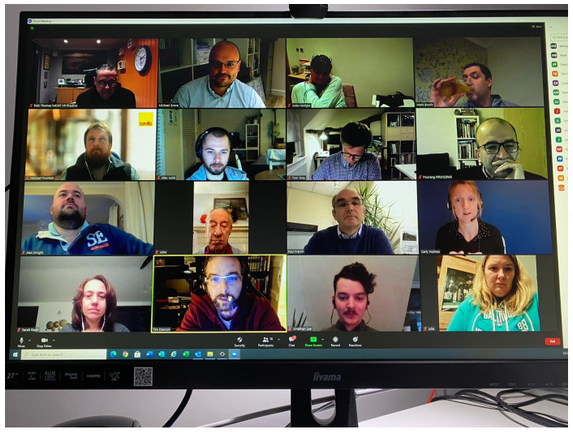
You need to be a student member, Associate member, affiliate or a Chartered Member for five years or less. Please send your expression of interest to education@ciat.global **by Friday 21 May 2021.**

For further information or if you would like to talk about the role, please contact Noora Kokkarinen, Assistant Education Director, n.kokkarinen@ciat.global or Dorota Fitzpatrick, Assistant Membership Director, d.fitzpatrick@ciat.global

Spotlight on: aspirATion South East

Words by Tim Danson & Alex Judd ACIAT, aspirATion South East Co-Chairs

We're already well into 2021 and just as busy as ever despite the challenges of remote working. In the South East Region, aspirATion has been working closely with the wider Regional Committee to find ways of making sure our members are supported in their studies and professional endeavours.



aspirATion South East and the Regional Committee meet virtually

Of course, the most important action for us to take was making sure that we have a plan for reaching out to members and affiliates and gaining potential new ones; if there's one thing we've all learned in the past year, it's that we are stronger together so it is important to our profession that it gathers together ATs and those aspiring to become one.

The aspirATion Co-Chairs for the Region, Tim (student) and Alex (graduate and Associate member), have been working closely with the South East Region's local universities where they carried out a virtual roadshow in the two weeks to the end of February and beginning of March, to spend time with both existing student members and new. They've been in the midst of announcing some of the exciting guest speakers for the year, as well as new prizes for second- and third-year degree students. These will be sponsored the Region's aspirATion Group.

Tim and Alex will also be using the Group's LinkedIn community to help members establish their presence as AT professionals, holding workshops in the coming months on publishing online portfolios, speaking with recruiters and hearing first-hand experience of Chartered Architectural Technologists. If you're based in the South East Region and are not already a member of our LinkedIn group, then please sign up here and join our community to hear more about how you can benefit from joining and qualifying!

Working closely with aspirATion's stakeholders has been critical in achieving our goals. Coordinating with the Regional Committee and its CPD Officer ensure we target speakers and events that are useful to all members and affiliates, regardless of where they are in their career, sharing knowledge and expertise from around the Region and other networks. Our goal is to create an environment that leads to students being able to quickly find their feet after graduating and progressing towards becoming Chartered Members themselves; whether they want to set up their own practice or join an established one, we want our members and affiliates to know that the support is there for them. We want our membership of CIAT and aspirATion to make a difference and help us to keep achieving throughout our journey as Architectural Technologists. It is an exciting journey that we're all on and we should be able to rely on our community to keep that excitement alive despite the challenges. If nothing else, we hope a series of quizzes for our Region throughout the year will help to keep the spirits alive!

We have been inspired by stories from our fellow Regions and it was great to see so many of the other aspirATion Chairs at our aspirATion meeting towards the end of last year. The support you've all provided has helped us get to the point where we are confident about making a positive impact. We wish all those involved with aspirATion success in 2021 and beyond.

AWARDS

Integrated Project

Winner 2020

STUDENT AWARD FOR EXCELLENCE IN ARCHITECTURAL TECHNOLOGY | PROJECT

Karaan Sabherwal ACIAT

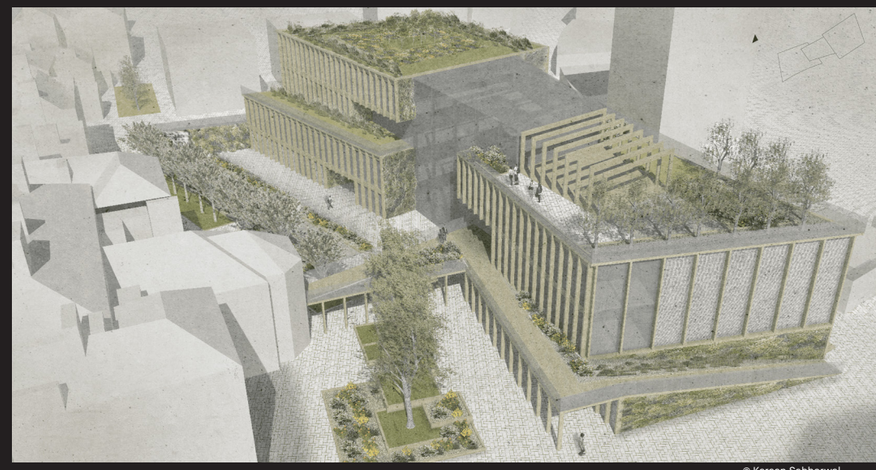
Visit **architecturaltechnology.com/awards.html** to find out more about Karaan's winning project

Karaan graduated from the University of Derby last summer and was the Winner of the 2020 Student Award for Excellence in Architectural Technology | Project. He spoke to us about his win, the affects of COVID-19 on his studies, and what the future holds.

Hi Karaan. Tell us a bit about where you studied and why you chose your course.
I read Architectural Technology and Practice at the University of Derby. I fell into it in a back-to-front manner; my business used the services of an Architectural Technologist and I found I enjoyed the design process and the challenges Architectural Technologists resolve. The programme at the University of Derby initially appealed to me because it is a CIAT-Accredited course as well as a Centre of Excellence, but it was the passion and enthusiasm of the teaching staff that convinced me it was where I wanted to study.

How much of an effect did COVID-19 have on your studies last year?
It was a challenge. Moving tutorials online made everything take longer, but as a mature student, the biggest challenge was the logistics of finding the time to actually do my degree work. My wife is a doctor so she was working long hours and with schools closed it didn't leave much time for working. Fortunately, the university and my tutors were very understanding. And so was my wife!

Were there any specific reasons why you decided to enter the AT Awards| Students in 2020?
Given CIAT's public profile, the Awards are also a great platform to present your work and your university to a broad audience. Although university was incredibly stimulating and an amazing formative journey, I was conscious of it being an educational environment, so having the opportunity to gain the perspective of industry professionals and our Accrediting body was important to me.



© Karaan Sabherwal

Give us a brief summary of your winning project. Were there any influences on your choices? For example, the strong environmental strategy used throughout?
The scheme proposed was to be the focal point of a broader redevelopment of the Sadler Square area in Derby City Centre. It was underpinned by the concept of creating a built environment that promoted the wellbeing of its occupants, while respecting and enhancing the historical narrative of the heritage rich urban environment that formed its context. Biophilic principles and responses to Derby's climate emergency, as well as wellbeing enhancing design principles, were central to this. It is difficult to pinpoint a particular element of the design that was most influential as I tried to adopt a holistic approach from inception. There was a lot of failure along the way, but I tried to develop the environmental strategy, buildability, technological design/ performance and innovative use of materials congruently to realise the ideas borne out of the concepts underpinning the design. Ultimately though, perhaps the greatest influence was the personal realisation of what wellbeing means to me and the importance that both nature and the built environment have in this context.

Did you find the submission process easy or challenging in terms of condensing a year's work into an award submission?
In many ways it was easy, by design the assessment criteria correlated closely to our university assessment criteria, so much of the submission was a matter of producing a presis of what I had already produced for my tutors. In other ways it was a challenge, but one that I found gave me further clarity around the design process I went through; having spent countless hours producing the project, it was tough to summarise it in a condensed form. That process forced me to revisit some of the ideas and concepts that fed into the design, helping me to retrospectively crystallise the design process into something transferable to my professional career.

What did you think of the very first online AT Awards event? Did it feel strange to not accept the Award in person or have the networking opportunities of a 'normal' AT Awards event?
In some ways it was a shame that we couldn't attend the Awards in person, but I also feel fortunate that they were run at all, given the logistical challenges it must have presented even as an online event. It would have been great to have met the judges and other industry professionals to hear their thoughts and feedback and I hope that we are able to attend this year's event.

How does it feel to have won the Award? The AT Awards| Students can be a kind of springboard for Finalists and Winners entering industry. Has it had an effect on your post-graduate life/career?
I must admit I hadn't expected to win, so I was surprised but overjoyed to have won the Award. I thought the other shortlisted projects were excellent, so it was a real honour to be considered alongside them, let alone winning. Receiving an award from CIAT will of course be a big positive in your profile and for your employability but I also valued the confidence it gave me in my potential as an Architectural Technologist.

What are you up to now in terms of your career? Has entering employment during a global pandemic proved a challenge?
I am working at a great practice, Swain Architecture, doing work across a breadth of projects and scopes. The current circumstances have, however, made it more challenging; inevitably you have less contact with colleagues and you have to make a conscious effort to seek out mentoring that in normal circumstances would have been forthcoming of its own volition. It is also a client-and people-orientated business, so forming connections with clients and consultants is more of a challenge.

Are you working on anything interesting?
Yes, but I can't possibly tell you about it... Clients trust us with their vision and I see part of my job as being vested in that, so every project is interesting. Much of the work we do is in the residential sector, where clients commit large amounts of resources to make their homes into the spaces and places that help them achieve the home environment and lifestyle they want and really it is a privilege to be a part of that journey with them. ■

AWARDS

Early Design Computational Simulation Tools for Net Zero Energy Buildings

Winner 2020

STUDENT AWARD FOR EXCELLENCE IN ARCHITECTURAL TECHNOLOGY | REPORT

Adeliia Papulzan ACIAT

Visit **architecturaltechnology.com/awards.html** to find out more about Adeliia's winning report

Adeliia was the Winner of the Student Award for Excellence in Architectural Technology | Report in 2020. She graduated from Birmingham City University in the same year and speaks to *aspirATion magazine* about her experiences of entering the AT Awards and her last year of university.

Hi Adeliia. Tell us a bit about where you studied and why you chose your course.
I studied Architectural Technology at Birmingham City University. During my studies, I took on a few internships to help widen my knowledge of what was expected from me as a professional. Growing up in Russia, I had a strong interest in historic and cutting-edge architecture. The reason I chose Architectural Technology as a programme was because I was interested in the balance of design and functionality of buildings. Whilst on my programme, I gained not only the ability to design and be creative but also understand the construction of buildings.

How much of an effect did COVID-19 have on your studies last year?
The pandemic had a massive impact on my last year of university as it was something new to all sectors, including education. It was very challenging to adjust to online lectures and have a lack of face-to-face meetings. However, as time passed by, it became a 'new normal' which completely changed my routine and approach to studies.

What made you decide to enter the AT Awards| Students in 2020?
When I started at university, I registered as a student member of CIAT. Each year, I looked at the AT Awards Finalists who demonstrated excellent technical reports and projects, which inspired me to participate myself. I am very delighted that I had this opportunity to gain a different perspective of my work and be a part of something involving other talented Finalists!

Tell us some more about your winning report. Were there any influences on your choices?
Well, in the early stages I wasn't sure of the report's topic as it was very challenging to narrow it down. I had changed the topic several times, but in the end, with the help of my tutor, I had discovered the one that I was passionate about.

The Net Zero Carbon Buildings Commitment is planning in respect that all newly built or renovated houses will have to comply with Nearly Zero Energy Building (NZEB) standards. In order to design up to Net Zero Energy building standards, three elements must be considered in the design process: reduction of energy demand through fabric energy efficiency; the operating phase of a building should not be more than the Carbon Compliance limit established; and any remaining CO2 emission must be reduced to zero.

Building Performance Simulation (BPS) can be performed during the different stages of the design process, including pre-design, schematic and design development stages to design and opt for the most efficient solution. Algorithmic Modelling or Computational Generative Design is considered an important tool to determine design potential and enhance the procedure of architectural synthesis.
In order to achieve a design up to NZEB Standards, the Algorithmic Building Energy optimisation aids to determine weaknesses of the initial design concept by manipulating parameters to achieve low carbon developments.

How did you find the submission process? Was it difficult to condense a year's work into an award submission?
The submission process was clear as this piece of work was a part of my major dissertation module, requirements of which were satisfying the entry criteria for the AT Awards. During the writing process, tutors were supportive and helpful to ensure none of the topic aspects were neglected. The instructions provided on CIAT's website were very simple and clear, which made the process quicker.

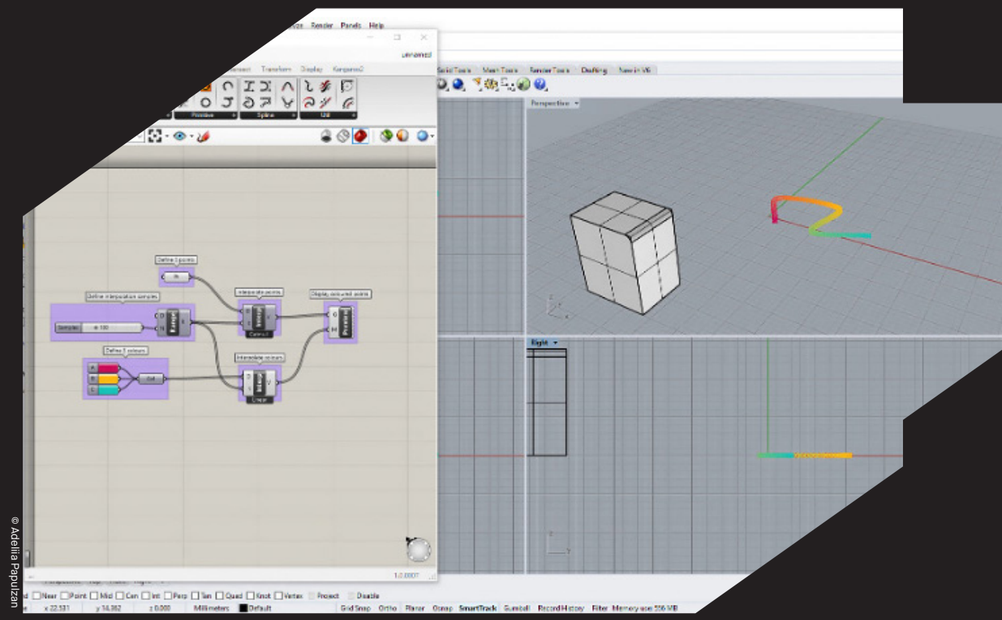
What did you think of the online Awards event? Did it feel strange not to accept the Award in person?
I was quite disappointed to not be able to attend in person as I was looking forward to the event and celebrating the achievement together with other talented people. The AT Awards is a great opportunity to network with industry professionals and be recognised for your hard work. However, in these difficult circumstances, I was grateful to be able to watch online and celebrate the success with my family.

How does it feel to have won the Award? The AT Awards| Students can be a kind of springboard for Finalists and Winners entering industry. Has it had an effect on your post-graduate life/career?
Flattered and grateful! It was an honour to be announced as the winner since I worked extremely hard to produce an in-depth technical report that will now be recognised. I would like to thank the judges for their comments and recognition of the report. The AT Awards is a huge advantage to your CV when entering industry as a graduate. It allowed my employer to see dedication, development and passion in my work, related to my professional career.

Have you got any advice or tips to those thinking of entering the 2021 Awards?
I would suggest opting for a report topic you are genuinely interested in and passionate about as it allows you to explore the subject deeper, thus having a constructive technical report. In addition, managing time is crucial as the layout needs to be planned beforehand. Revise or if necessary rewrite the final draft before submission to ensure high quality of work. Most importantly, always believe in your success. Your hard work will always pay off!

What are you up to now?
I'm working as a BIM Architectural Assistant at Zaha Hadid Architects. In terms of securing a job opportunity, I was extremely lucky to be employed straight after the completion of my degree, especially during this challenging time. It's been a huge challenge to adapt as a graduate in the practice, but my wonderful team have been a constant help.

Are you working on anything interesting?
I have been involved in the Hangzhou Qianjian New Town River East Masterplan since November 2020, which consists of five plots. The physical and visual connection between the plots is not only expressed at podium level, but also along the body of the building through the presence of several linking bridges that connect each building's special functions. ■



AT Awards| Students Winners & Finalists

aspirATion magazine takes a look at the other Winners & Finalists in the Student Award categories

STUDENT AWARD FOR EXCELLENCE IN ARCHITECTURAL TECHNOLOGY | PROJECT

Commended

Green City, Residential Development

Reece Scattergood ACIAT,
University of Derby

The brief was to provide a large open green space for the public to use, whilst offering a diverse range of sustainable living accommodation, shops, bars and restaurants. The development has used simple construction methods integrated with modern technology to provide a fully sustainable development with a large bio-diverse area.

Highly Commended

Sheaf Valley Link Project

Henry Yang ACIAT,
Sheffield Hallam University

A project for a building adjoining Sheffield's train station to promote commercial growth within the city. Its design draws inspiration from one of the most fundamental connections in the human body, neurons. The solution combines sustainable measures with a mix of structural elements on a very challenging site.

Finalist

Playing with Music

Maeve Corke Butters,
Mackintosh School of Architecture

This final year project involved designing a residential music retreat with a performance hall. The brief was to design a new Sistem Centre according to a prescribed spatial programme and develop a wider public space and landscape strategy. The two buildings are close together to allow for diversity in the urban fabric however, strategic positioning of walls and green spaces has been used to define the difference between the public and private realms.

Finalist

Intersections

Ben Hall ACIAT,
Sheffield Hallam University

The brief was to provide a mixed-use development, a building which will be a hive of activity and commerce. It will provide primarily flexible exhibition and office space of varying sizes. The site is at the heart of Sheffield city centre; an existing footbridge stands over the railway lines which are to be demolished as part of the works and replaced with a wider, more accessible bridge.

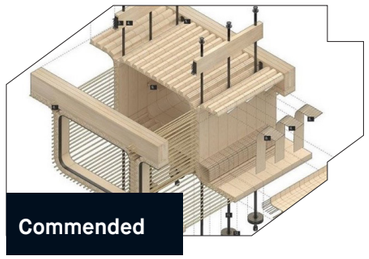
Finalist

Passive Design Hub

Bradley Harding,
Anglia Ruskin University

The project brief was to design a multidisciplinary office that allows construction and design professionals of CIAT, RIBA, iStructE etc. to all work under one roof, boosting productivity and on/off site relations between professionals. The brief asked for a 'model' of a building that sets an example for future schemes, showing how the construction industry can move forward with a green mindset in construction and design.

STUDENT AWARD FOR EXCELLENCE IN ARCHITECTURAL TECHNOLOGY | REPORT



Commended

Intelligent Assets Tracking with Circular Economy and Blockchain Technology in the Construction Industry to Solve Urban Problems for Sustainable and Equitable Futures

Shehzadi Mohammed,
Manipal Academy of Higher Education

The report addresses a vision and an action roadmap to a paradigm shift in the built environment sector industry to create an unsurpassed model that reflects the transition to a circular economy with the help of blockchain technology, by utilising materials that are salvaged, reclaimed or up-cycled.

Highly Commended

GenerATive Design – Redefining Roles Within the Design Process

Stuart Cully,
Ulster University

This report explores the significant change currently happening to architectural design as a result of digital disruption. It identifies current generative design tools and applies them to produce a workflow for the design of a hypothetical eco-hotel. The findings from this study highlight that there are many benefits to employing a generative design approach but it will require human input and analysis.

Finalist

Applying Carbon Neutral Principles to the Resolution of Architecture

Ben Hall ACIAT,
Sheffield Hallam University

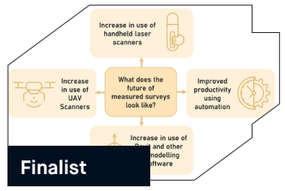
This report investigates the application of carbon neutral principles. A selected 1:20 section was developed to identify the critical junctions, resulting in three 1:5 callout details being produced. The aim of this exercise was to produce a resolved building envelope which addresses the design issues presented at the outset of the report.

Finalist

Achieving a Circular Built Environment: A Critical Analysis of Cradle-to-Cradle

Nick Jones ACIAT,
University of Plymouth

This study focuses upon the cradle-to-cradle philosophy, a design methodology which has formed its own certification program to support the circulation of products within the circular economy. The cradle-to-cradle paradigm is beginning to be applied to buildings aimed at going beyond the typical 'green' and 'sustainable' eco-efficiency approach, to provide buildings with a positive 'eco-effective' ecological impact.



Finalist

The Future of Technology in Measured Surveying Practices

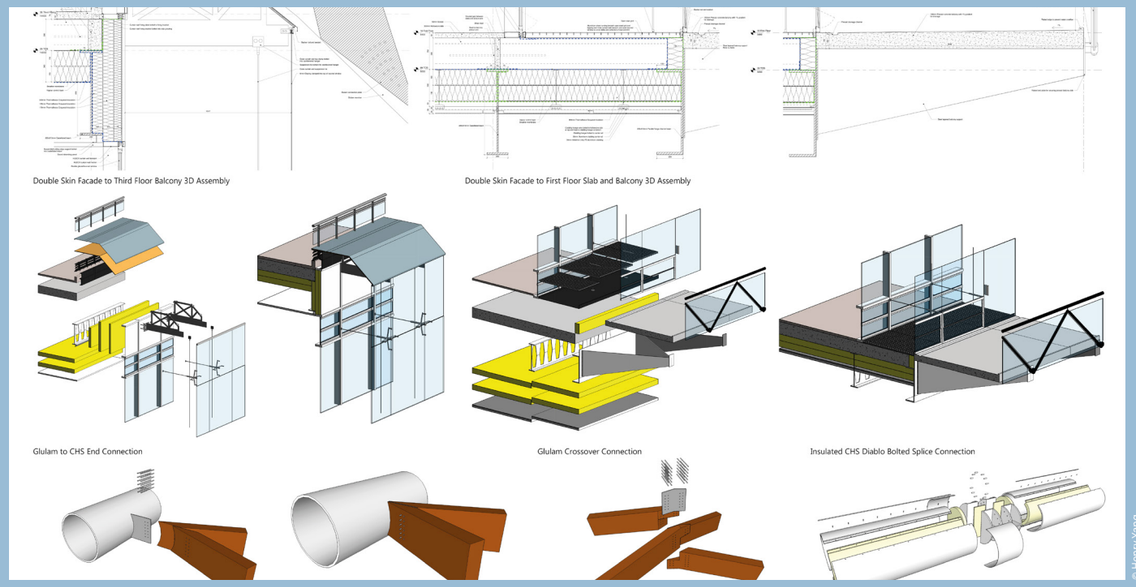
Lucy Mannion,
Birmingham City University

This research aims to evaluate the current technology used for measured building and land surveys to find out how these could be developed and improved in the future of the industry. The purpose of this research is to identify the problems encountered within practices, and to ascertain innovative technological advances that could be integrated into the industry to improve the workflow and increase productivity.

How to: Perfect your portfolio

Words by Stride Treglown

At Stride Treglown, we are interested to discover the person behind the CV and portfolio applications. We want to understand what drives the individual and what sets you apart from every other application. Aside from the obvious high quality visualisations and images, it's always useful to demonstrate a clear capability in technical detailing.



Person behind the portfolio

The portfolio should not be limited to technical drawings and specifications as we are also interested in those peripheral skills and capabilities which lie around the primary role of an Architectural Technologist, such as confidence, honesty, openness, and professionalism. Careers in Architectural Technology can be varied and it is important for you to include information which best demonstrates your capability or interest.

We are excited to understand your career journey; this can often include the type of course you have studied, whether you have a design or a technical focus, or the practice experience you hold, details of your education, professional qualifications, sectors, specialisms, pre- or post-graduate experience, skills, and software experience with clarification of your competency and length of usage.

Detail is key

We often find that Architectural Technology courses have a strong focus on the visualisations but the generation of construction details and understanding of what you are drawing is equally important. Lines on drawings typically reflect elements of construction works and we are looking to see that level of understanding, comprehension and pride in the drawing.

Being an Architectural Technologist involves a clear passion for delivering inspirational buildings, but with it is an equally passionate, yet binary understanding of how details are formed in which to honour those designs. We are interested to hear about design principles which demonstrate the candidates range of experience and knowledge to understand how their project is constructed. We will typically ask you in interview about an aspect of the detail evolution to establish if you understand what has been drawn. It is important therefore to consider the examples you are placing within your portfolio and subsequently presenting, so as to be able to confidently discuss them.

Demonstrate your flexibility

We look for pride in the drawings you submit. A good detailed drawing can be equally pleasing to review as a fully coloured perspective visualisation. It is great to have a mixture of both, but don't limit your submission to one or the other. As Architectural Technologists, we are flexible and capable in both design and technical delivery and each should be included to demonstrate the breadth of your capabilities. Stride Treglown encourages ATs to run projects alongside architects, as well as independently in their own right, so we would also actively encourage evidence which demonstrates areas of specialism and capability for project running from conception to completion.

Do your research

This is probably the most important aspect for someone in creating their portfolio before approaching a practice. We would encourage you to always research the practice before submitting a CV and portfolio. It is a hard concept to pause and take a moment to do the necessary research to stand out and not simply scatter your CV to many practices by email in the hope of getting a reply. This is a major transition to make as you embark into the workplace and it is important the practice is right for you too. An interview is always a two-way discussion and it is incredibly crucial to understand what you also want or need from an employer.

Therefore, we believe it is vital to do your research; your career is an essential part of your life so find out about the kind of practice you want to apply to, ensure it undertakes the kind of project work that motivates and inspires you, reflect on the office culture, establish what initiatives drive them and most importantly, what training and development opportunities may be available. Ultimately, before clicking send on that email application, ask yourself, does the practice fit your aspirations?

> "Employers look for pride in the drawings you submit. A detailed drawing can be equally pleasing to review as a fully coloured perspective visualisation."

STRIDE TREGLOWN

Stride Treglown is one of the top employers of Chartered Architectural Technologists

It is always reassuring to hear feedback from the candidate within an interview that demonstrates a clear understanding of your ways of working, project types you deliver and essentially why it is they approached your practice and how they see themselves fitting within it.

Be visual

Stride Treglown review submissions with equal interest and aim to understand what drives the individual's design and technology career path and their presented work. Working within a visual industry requires you to be capable of graphically communicating your skillsets and the examples you submit are essential to communicating your calibre. Submitting a written-based application without accompanying visual examples of your work is to be avoided. We delight in reviewing applications which are accompanied by a wide-ranging selection of evidence.

Extra tips

Setting up a Linkedin profile is a great step towards creating your professional portrait as it enables you to form a network, review the industry practices and be inspired. It is also a key platform in which to share your views and experiences.

Become registered with professional bodies such as CIAT, RIBA, RICS, and CIOB as early as possible. This not only promotes a Code of Conduct and professionalism we encourage, but also builds an essential support network around you whilst at university and when you leave and move into industry. At Stride Treglown, we are always interested to hear how your career will evolve in the future and encourage progression from Associate membership towards Chartered Architectural Technologist, MCIAT and Fellow Membership, FCIAT, as you begin the early stages of your career. ■

Upgrading your student membership

Words by James Banks, Membership DIrector

As you come to the end of your studies, we take this opportunity to wish you all the best in your final exams, especially in these challenging times!

CIAT is here to support you with your career and professional development as an Architectural Technology professional after you graduate.

We have collaborated with Hays, the largest recruiter in the UK and Republic of Ireland, and created an employability guide (click here to view it) which provides helpful tips and information regarding CV preparation, how best to apply for jobs and prepare for interviews, as well as advice on being offered the job and starting a successful career. In addition to this, click here to check out our AT|jobs site as well as other recruitmentn agencies which can advice and support you at this time.

Upgrading your student membership to either Associate, ACIAT or affiliate status with CIAT demonstrates to potential employers your commitment to your career progression. We encourage you to upgrade as soon as possible and no later than in the same year as programme completion to take advantage of a two-year staggered supportive subscription. These rates are:

Year 1
£145 (instead of standard rate £295)

Year 2
20% off standard full subscription rate

To take advantage of this, you can upgrade online from **1 May 2021 at architecturaltechnology.com/joining.html**

A suite of films about the qualifying process can be viewed on our YouTube Channel at **youtube.com/CIATechnologist**

For any queries related to upgrading or registration, please do not hesitate to contact **membership@ciat.global**

4 reasons to upgrade

Accountability

Demonstrate your commitment to the highest professional and ethical standards in Architectural Technology.

Support

Dedicated support with professional progression and a range of information and resources.

Development

Attend CPD events locally and through our AT CPD Register and receive specialist support via MentorMatchMe and Technology Network.

Networking

Engage with your peers and fellow professionals. Make new contacts, exchange ideas and expand your professional and social networks.

To take advantage of our supportive subscription offer, upgrade online at architecturaltechnology.com/joining.html and use code SA21 to receive your staggered subscription rate

The job interview: your guide to success

Words by Hays

Here are eight key actions to follow, before, during and after your interview.

For more career advice and insights visit **hays.co.uk/architecture**

1. Do your research

Before you enter the interview room, do your homework. Take time to review the company website, search for existing employees' LinkedIn profiles, and take the time to follow and study the company's social media channels.

Through proper research you will be able to get a real idea of the DNA and culture of the organisation, so you can then reflect that knowledge during the interview. In doing this, you are demonstrating to the interviewer that you have made a real effort to do thorough research, implying that you are very interested in the role.

2. Practice makes perfect

It's also worth considering some of the key interview questions you may be asked and prepare some answers that you may like to give. What are the most common interview questions for this particular role and sector? Do you have an idea of how you would answer these?

Study the job specification and cross reference it with your CV. Are there projects, specific training courses or examples from your previous jobs that are particularly relevant? Have clear details of these that you are prepared to talk about.

Practise your answers out loud at home beforehand and, if you can, have someone listen and give you feedback. This kind of preparation will ensure that your suitability and keeness for the role comes across in the form of concise and composed answers that resonate strongly with the interviewer. This will also demonstrate that you have taken the time to practise your interview technique, so must care about the opportunity.

3. Bring a portfolio

Be sure to prepare a portfolio to issue in advance and/or take it to the interview as it will reflect your capabilities and experience within the discipline in more detail. Only include evidence that has been produced by you and demonstrates your current skill level. This should consist of relevant coursework from university/college and/or evidence from work placements. As your career progresses, your portfolio will grow and should be tailored accordingly.

4. Make a good first impression

The first few minutes are arguably the most important, as this is when your interviewer will gain a first impression of you.

Make sure you test any software in advance and arrive for your interview 5-10 minutes early, but not so early as to interrupt their schedule. Ensure beforehand that you know where you're going and are clear on who you are meeting so that you can be confident when you arrive. Dress smartly, even if it is not necessarily expected from the day-to-day job as this indicates a level of respect for the interviewer and your willingness to put effort into securing the job.

5. Ask questions

The interview is a great opportunity to learn more about the role and get a feel for the company. Consider asking if the position is new. If not, how has it evolved? This will provide you with some insight into the direction the business is taking.

Ask about the stakeholder of the position, the measurements of success and the tools you will have at your disposal to ensure you will exceed expectations. You may also learn something interesting about the organisational culture from these questions. Remember to ask the interviewer for details of their background too as this will help build your rapport with them and show your people skills.

Asking the above questions will show that you want the job on a number of levels. It will show enthusiasm and demonstrate your curiosity to learn more about the role, the interviewer and the business. You will also be able to strengthen your answers based on any insights that you get from asking these questions, demonstrating your attentiveness throughout the interview.

6. Don't overlook the importance of non-verbal communication

A smile, eye contact, and control of your hands while speaking all contribute to transmitting your enthusiasm to add value in the company.

Demonstrating your passion will certainly give you a competitive edge over the other candidates and provide you with the best possible chance of starting work in your dream job.

7. Your final pitch

Once the question and answer segment is over, but before you leave the room, think about giving a one or two minute 'pitch' which wraps up why you're so interested in this role specifically. This is your last chance to make an impression, so be clear and precise. This may well be how the interview panel remembers you. Make it good. It may be sensible to practise this at home.

8. Follow up with a thank you

The last thing to think about is some basic manners; follow the interview up with a thank you email that emphasises your keenness for the role and company. Send this to your recruiter to pass on to the hiring manager at the company but keep it short, sweet and to the point. This is the polite and professional finish to a great application and interview.

What to do next

If you've had a successful interview and have been offered a position, you should be very excited! However, it's not the end of the process. You still have much to consider before you accept or decline a job offer.

Don't act before you've had a chance to take some time to consider the offer. Give the hiring manager a time frame you can stick to and speak with your recruitment consultant if you have one. Once you make your final decision, you should let the hiring manager or your recruiter know as soon as possible.

If you decide to accept the position, remember that realistic negotiations are part of the process, so explore the possibility of any potential movement on salary and benefits. Make sure you read your offer details thoroughly and confirm everything via email so that you have a written record.

Finally, be excited! This is the first step in your career. Convey this excitement to the hiring manager to further underline that they have made the right decision.

If you follow the tips outlined here, you could well be on your way to securing your first job in Architectural Technology.

Recruiting graduates. Now? Really? Who is doing that?

Words by Cath Basilio, Senior Lecturer, Department of the Natural & Built Environment, Sheffield Hallam University

Architectural practices have furloughed staff or are making them redundant or worse, exploiting the rules and pressuring staff to work while furloughed, according to architecture's fledgling trade union, UVW's Section of Architectural Workers (UVW-SAW).

The March RIBA workload survey predicted the strongest drop in architectural workload ever and Adrian Malleson (RIBA Head of Economic Research) reported back in April that: "There will be long term shifts...perhaps towards an urban architecture that can better facilitate social distancing, perhaps to an economy that relies on people moving themselves about to do business, perhaps to greater digitisation and offsite construction." This was coming at a time that many students were beginning to think about placement work and final year Architectural Technology students were not alone facing the challenges the coronavirus would pose to the class of 2020.

Amongst the downturn there were opportunities; two were advertised just a couple of weeks into lockdown. Paul Bangert MCIAT, Technical Manager of Capital Delivery Services (CDS), a 20 strong multidisciplinary team of architectural, mechanical, electrical and structural staff at Sheffield City Council, were looking to grow the number of Revit experienced staff and with the previous experience of successfully appointing two Sheffield Hallam University (SHU) Architectural Technology graduates, it was time to look for further talent.

COVID-19 could easily have been the reason for abandoning recruitment but CDS pressed on with their plans.

Interviews had to be virtual. Commonplace now, but new to most people at the time. Zoom (or similar) was a different approach that so many practices were having to embrace. Patrick Back ACIAT and Ethan Dunbobbin ACIAT (the successful SHU AT graduates appointed) said the interview process was a 'mixed blessing'. Although it was more comfortable because of the familiar surroundings (i.e., at home), it was missing the personal interaction of introductions, the technology made it difficult to have casual conversation and the process seemed less spontaneous.

Even though the interviews were in the early part of the transition to online working there were some benefits identified by both sides. The ability to use 'screensharing' to demonstrate their portfolio gave students control of the technology and showed the interviewers how skilled/comfortable they were with the online tools they would be using on a day-to-day basis. Usefully, a previously appointed SHU student, Tom Dobby MCIAT, was invited to join the Zoom meeting at the end of the interviews to give an overview of the experience of joining CDS as a graduate himself. Ethan and Patrick found this part of the process really helped. Tom had recently achieved his professional MCIAT qualification in just two years and a promotion followed, so he was a fantastic role model.

An interview would usually often finish with a walk round the office and a chance to meet other staff, but this was not possible, and photos didn't give quite the same comfort.

So, without the usual introduction to the office and its work, how were two completely new and inexperienced staff able to integrate and contribute effectively? After all, they did not get to meet any of their colleagues until months after they were appointed. Many employers find it difficult enough to trust staff working from home; what about unfamiliar young staff?

It is interesting to consider what graduates are reporting about their preparations for working online. Students in the United States of America have a spokesperson, but the sentiment has also been shared in the United Kingdom. Erin Conti, incoming president of the American Institute of Architecture Students (AIAS) commented: "There is something about the studio that you can't fully replicate digitally," she says, "but honestly, the adjustment hasn't been that bad. If studios can go online – by choice and not by necessity – it would make it easier for more students to access an education in architecture."

There were challenges for CDS starting its new staff remotely. Graduates began work with their own hardware before office equipment could be made available and they had to cope with setting up their own technology interface with the office network, software licenses and communications with other staff, assisted by colleagues but remotely from their locations in Liverpool and Cumbria, certainly the longest commutes of all the staff.

Ethan and Patrick recognised the trust and responsibility that they were given from the outset. Given work to complete using Revit and AutoCAD on projects with deadlines, they felt they had to 'hit the ground running' and that the first few weeks were hard. Weekly team meetings helped but as new voices amongst the established team, it was easier to develop one to one relationships first. The discipline and timekeeping instilled in previous placements were identified as essentials for staying motivated while isolated.

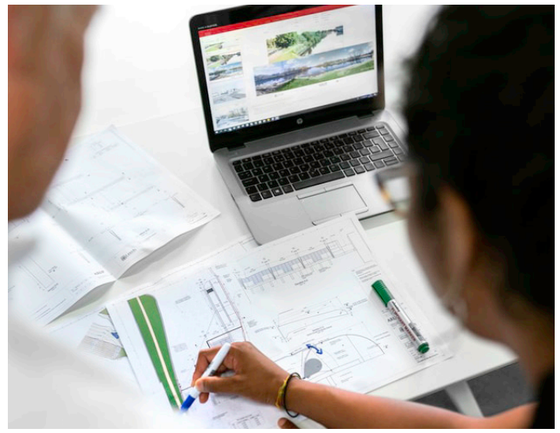
As their employer, Paul Bangert would highlight that care had to be taken to give appropriate work for the level of skill and confidence (as would be usual) but that they were quickly productive members of the project teams. The disciplines and protocols for using digital design tools taught as part of their course gave them a head start assimilating the office digital protocol but also gave space for them to use design skills and not just end up as 'CAD monkeys'. Both graduates appreciate the multidisciplinary nature of the office gives them wider opportunities for learning but admit that they miss sharing a physical space with other members of the team and getting to know others socially. It is this that helps graduates join the architectural family. Paul, like many office managers, has introduced regular social opportunities where talk is about topics outside work and involved humour, quizzes, and games to offer some respite from the isolation felt by many.

> "Graduates began work with thehir own hardware before office equipment could be made available and had to cope with setting up their own technology interface"

The new staff continue the knowledge transfer already started by previous graduate Tom Dobby MCIAT, giving the office the skills and confidence to move onto using Enscape and BIM 360 and contributing improvements in other areas like presentation, all while absorbing the technical expertise from a knowledgeable team of highly competent professionals. An example of this blending is the new 3D approach to remedial measures for Sheffield's single staircase tower blocks following the Grenfell Inquiry.

The RIBA has recently published the results of its COVID-19 Student Survey, showing that 5% of architecture students already want to leave the profession and that 20% lost a job offer or part-time role in practice. However, nearly 60% feel that online learning is good preparation for practice.

So where does that leave us?



In this example, the employer has made it clear that a good working knowledge of design/production software is always going to need to be at the forefront of the skills new graduates present; anything less is to ignore what is needed most. Ethan and Patrick highlight that it has been the ability to collaborate and function as a digital team member that has given them value and something to contribute that makes it more likely they will get to exercise their independent creative design and problem-solving skills.

It may be difficult now to consider taking a graduate, but consider those AT students who have skipped a placement; what will their opportunities look like? It's true that the Higher Degree Apprenticeship route to study while you earn may offer an alternative for some, but for others experience in an office is vital to be able to appreciate the new online workflows and digital tools being used in architectural practice. Practices need to make space for graduates alongside other staff; not just at the back of the jobs queue.

The challenge for practices is to exploit the opportunities that COVID-19 presents and ensure that as offices return to work, a balanced and proportionate workforce is maintained and that there is space for graduate recruitment. Perhaps the key message to students and employers is to: *"Be prepared, be more than prepared."* ■

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Support during COVID-19

Words by Architects Benevolent Society

With coronavirus having a huge effect on all areas of student life, it is easy for things to become overwhelming and important to seek help as soon as possible. Architects Benevolent Society (ABS) are here to offer a range of support to the CIAT community through their work with partners such as Shelter and Anxiety UK.

For those who have one year of experience in UK industry, we can offer support services such as money & debt, employment, housing advice, mental health support and physical health & disability. If you need help, the ABS Welfare Team can provide confidential advice and a range of support based on your individual needs.

Mental health support

Mental health is an important issue in all walks of life, now more than ever. Within this profession particularly there is a culture of working long hours with pressing deadlines. This culture is engrained from undergraduate level and increasingly we are finding that these pressures can be too much at times. David Comiskey FCIAT, Senior Lecturer at Ulster University and author of *Changing attitudes towards the mental wellbeing of early career Architectural Technology professionals,* a publication aimed at promoting student wellbeing says:

"My support for ABS stems from what I see as a responsibility in my role as an academic to promote the message to the next generation that it is OK not to feel OK and to reach out for help if, and when, it is needed. This not only relates to mental wellbeing, but in all aspects of life. We are all human and from time to time need support, advice and encouragement. I see my role as not only promoting the great work of ABS, but being that person that individuals can reach out to if they are in need of help."

Architects Benevolent Society partner with Anxiety UK to provide student memberships, which includes:

- Annual membership of Anxiety UK (including a free subscription to Headspace app, access to reduced cost therapies and many more)
- Dedicated email support
- Dedicated phone helpline

David Comiskey FCIAT, right, and his publication *Changing attitudes towards the mental wellbeing of early career Architectural Technology professionals*

For those with at least one year of work experience in UK industry, we can make a referral for a wellbeing assessment and one to one therapy should you need it.

You can download David's paper, *Changing attitudes towards the mental wellbeing of early career Architectural Technology professionals* here.

To know more about how you can access ABS support, visit **absnet.org.uk**.

To find out more about the *ABS Foundation of Support Campaign*, which aims to spread the message across the architectural community that they are a foundation of support for people who may need assistance, go to **absnet.org.uk/foundation-of-support**.

Feeling anxious or stressed?

Now more than ever, times are tough with coronavirus having a huge impact on all aspects of student life. Whether you're feeling the pressure of work or study, worrying about the uncertainties of the architectural profession or facing problems with your health or home life, we can help you get the right support at the right time.

Here when you need us

We're proud to work in partnership with Anxiety UK (AUK) to provide practical and effective support to those experiencing stress, anxiety and anxiety based depression.

AnxietyUK
Here for you since 1970

All students can recieve:

- Annual membership of Anxiety UK (including a free subscription to Headspace app, access to reduced cost therapies and many more)
- Dedicated email support
- Dedicated phone helpline

Students with one year's experience in UK industry can also recieve:

- Wellbeing assessments
- One-to-one therapy including CBT, hypnotherapy & acupuncture

Please contact us today

ABS Helpline **020 3918 8588**
or email **help@absnet.org.uk**

@ArchBensSoc
www.absnet.org.uk
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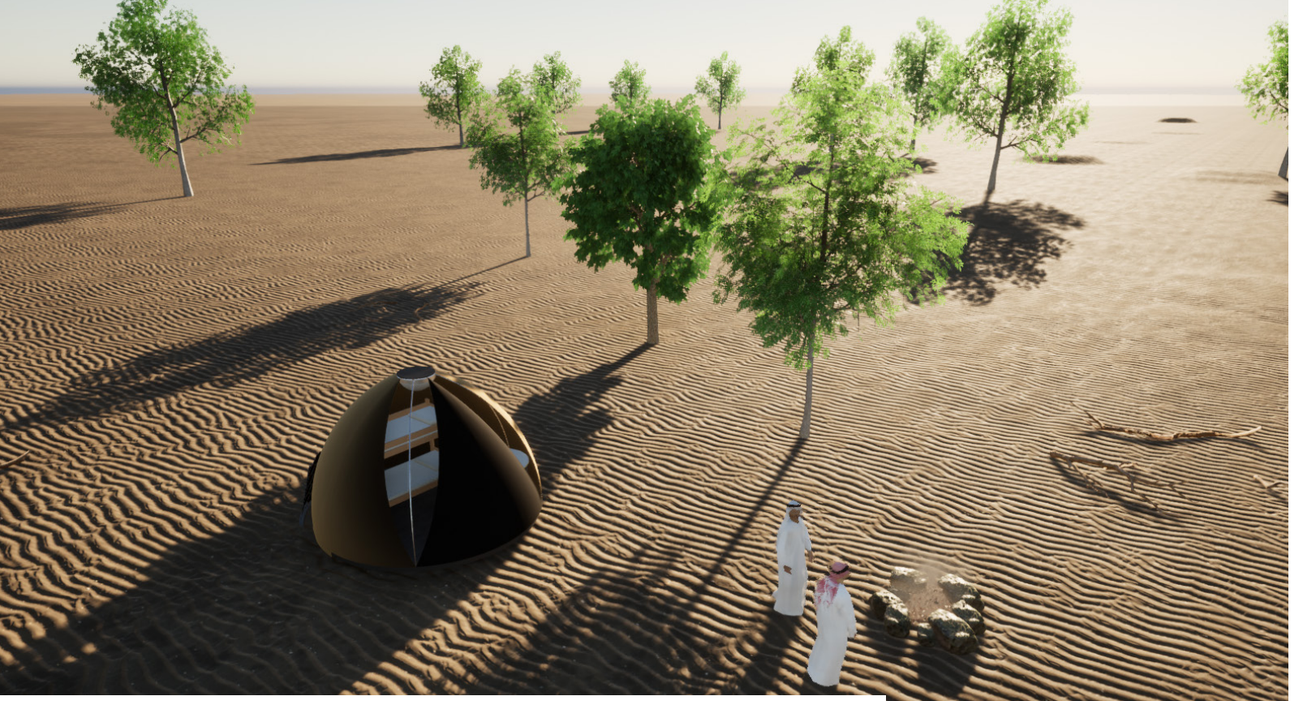
170 YEARS



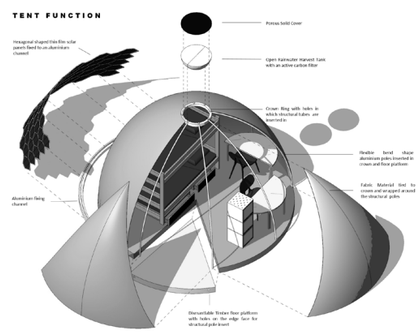
Extreme Desert Tent International Design Competition

Words by Lewis Munyoro, Graduate in BSc Architectural Technology at Coventry University

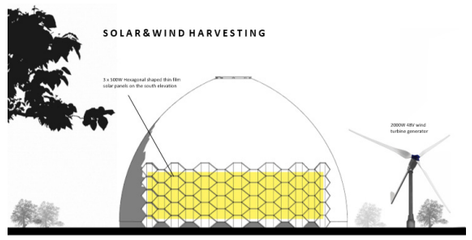
After submitting my final design project at Coventry University, my lecturers told me about an Architectural student design competition, which I immediately entered.

The competition, Extreme Lodge Desert Tent, was organised and sponsored by Extreme Lodge, who invited students worldwide to design a temporary shelter for climate researchers located in the very hot desert climates of the Gulf. According to the Extreme Lodge website, the competition was initiated on the basis of helping designers create buildings and structures that play a significant role in climate change solutions. In total, there were 167 students from 50 cities who participated in the competition as well as 13 judges from a variety of backgrounds in architecture and engineering.

The sheer number of participants alone made winning the competition difficult as the quality and expectations from the judges were high. The judges assessed our projects based on a set of criteria, which included solar performance of materials, energy considerations, function, usability and the overall design quality of the proposal. Having met most of the criteria, I was awarded second place!

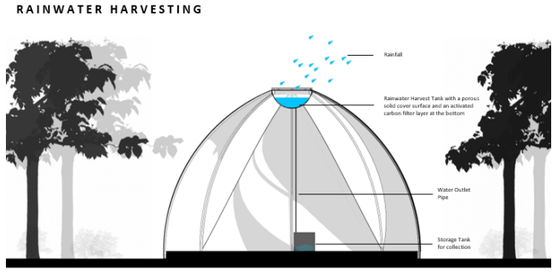


© Lewis Munyoro



- The proposal makes full use of the solar radiation in the location by using thin film panels on the South facing elevation which is highly exposed to heat gains from the sun as well as a wind turbine to harvest the strong winds in the area and help meet the energy load demands

- The site is in close proximity to Lake Moghran, the air around it will be significantly cooler than other locations. As a result, the cool air can be pushed by the easterly winds providing a slightly cooler breeze towards the tent. This could potentially help reduce mechanical cooling loads in the summer period.



- The design maximises an increase in rainfall during the winter period in Dubai by making use of a Rainwater harvest system at the top of the structure which captures rain and stores it in a tank/bottles through an outlet pipe. Water is filtered for drinking or any other use.

© Lewis Munyoro

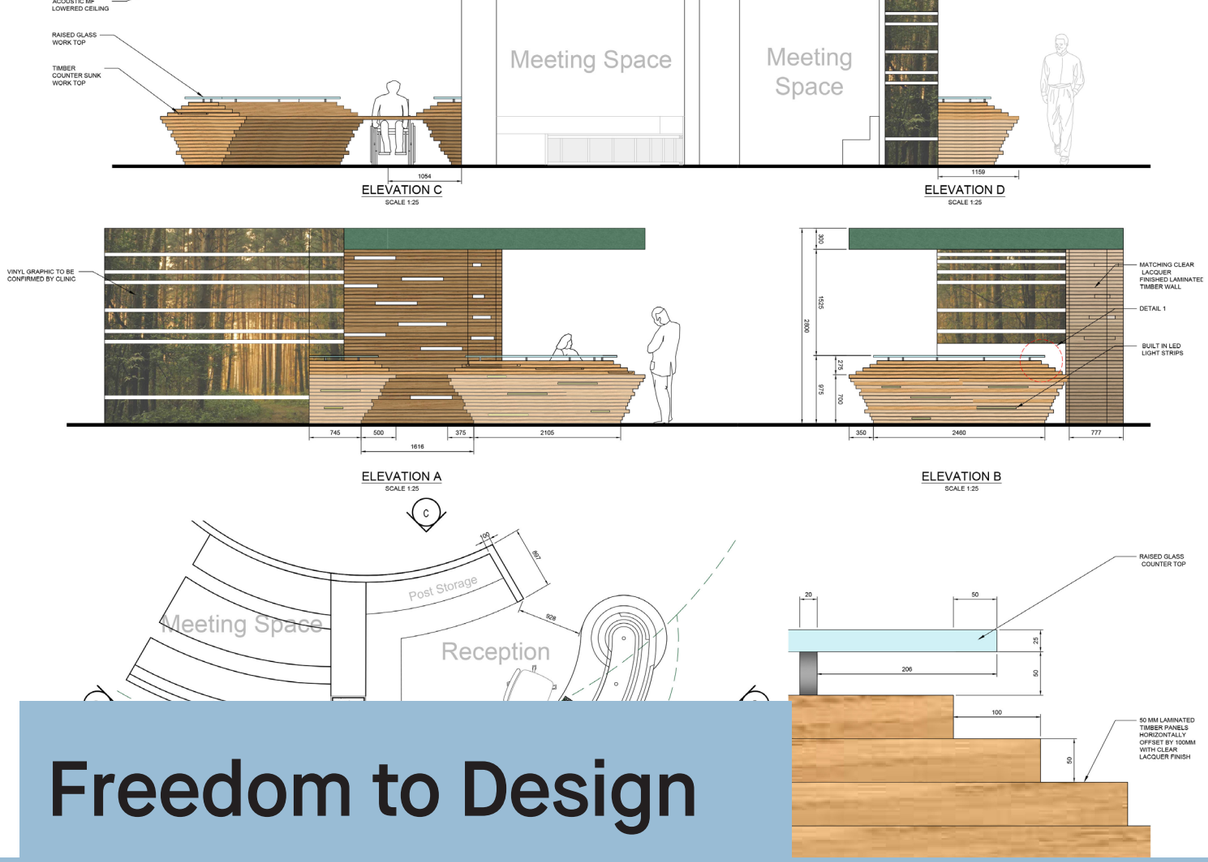
My design proposal was based on an in-depth site location assessment which heavily influenced the overall design, orientation and placement of the tent by identifying various possible sites based on different merits of each location. These were weighed out accordingly in relation to the optimal performance of the structure. For example, the chosen site utilised existing trees to act as natural shade elements and wind barriers to protect the structure from extensive wind impact, resulting in a prolonged structural life span. Also, a lake in close proximity was used to provide evaporative cooling to the tent, mitigating mechanical ventilation costs. The site location faced a significant solar gain issue as it was located in a desert and solar gain simulation models were utilised to try to resolve this. Based on the model, during the summer in Dubai is when the tent structure would have the highest solar gains and therefore the tent was proposed to be fully closed throughout this period and openable in winter. This would allow the use of high thermal performing materials on the outer skin to mitigate heat penetration into the tent, creating a more comfortable indoor air temperature for the occupants.

The tent structure was made with dome-like traits to increase the aerodynamics and allow for wind flow around the structure without flat surfaces to hit which reduces the potential of structural damage due to extensive winds. Furthermore, the structure consisted of a thick timber ring which increased its robustness as well as flexible bend shape aluminium poles placed around a timber deck floor in a 360-degree manner to create optimal structural stability. The design brief had a strong emphasis on ensuring the portability of the tent, hence my proposal of a simple but robust structure with dismantable, easily transferable aluminium poles that could be erected with no unique skill required.

Materiality was essential in this proposal as I carried out physical material tests using the Hot Box test to identify the best performing material, based on their Delta temperature change per time period. The single heavy-duty PVC coated polyester was the chosen material for the outer tent skin, outperforming other materials such as the Vinyl coated polyester with a Delta temperature change of 12 degrees, proving it was well suited for hot climates. Also, the material is locally manufactured in Dubai which would help reduce carbon emissions regarding material transportation.

In terms of energy strategies, the proposal made optimal use of the extensive solar radiation in the location to generate electricity through solar harvesting. To maximise this, thin film solar panels were proposed on the south facing elevation as it was an area highly exposed to solar heat gains, based on the solar gain simulation carried out of the model. A wind turbine generator was also proposed to supplement and help meet the energy load demand as the location had high wind speeds of >24mph. Natural cooling was achieved by the placement of the tent in close proximity to an existing lake and using the evaporative cooling method where cool air evaporation from the lake is pushed by the wind toward the tent, reducing mechanical ventilation dependency.

Overall, the competition triggered a new way of design thinking which I previously wasn't familiar with and enhanced my general understanding of the performance of materials in high temperature locations. The experience also helped me gain an insight into how passive and active cooling strategies could be achieved and utilised to significantly reduce carbon emissions and create a more sustainable built environment within the Architectural field. ■



Freedom to Design

Words by Martyn Riches ACIAT, Architectural Technologist, Network Rail Design Delivery

Like most Architectural Technology students, I had the opportunity to gain work experience through a placement year shortly after my second year of university. However, unlike anyone I knew, I was extremely fortunate to work for a large corporate organisation. I secured a placement for the internal architectural team within Network Rail's Buildings and Civils Design Group, a multidisciplinary team based in York.

Unlike most large practices or organisations, this newly formed architectural team consisted of a Chartered Architectural Technologist, an Architectural Assistant and me. Although we operate as a small practice, we have the large resources of a large corporation which has access to projects across the United Kingdom.

What stood out for me was the freedom and trust given to me to design. This may sound like a strange concept, as almost all practices exercise their liberty to allow junior staff to design small elements of a job. For example, the wall finishes, furniture finishes or flooring; tasks that make little impact on the scheme but give the illusion of design responsiblity. On the other hand, I was given something more meaningful to design.

When I joined, the team was nearing the end of the concept design stage for a project in Edinburgh. The scheme was an existing warehouse, formally owned by Edinburgh College, which was to be transformed into a maintenance delivery unit (MDU), a support facility for railway track staff. The site would contain materials, tools, vehicles, personal equipment, and workshops as well as welfare facilities. Additionally, the project was tasked with accommodating office staff all under one roof. This was the biggest challenge as their needs contradicted those of the track staff and so the Parti[1] for the scheme was industrialised comfort. How can we make a space comfortable but be functional, robust and with a railway vernacular?

My role within the project was no minor element. I was handed a project within a project, complete with a list of requirements, a brief and the objective of seamlessly fitting this design element within the overall MDU scheme. I was tasked with designing the main entrance and reception area, with a bespoke reception desk and adjoining meeting rooms. Although the scale of the task was relatively small in comparison to the scale of the overall scheme, the importance of getting this area right was made abundantly clear. It is the first thing staff and visitors will see when entering the building and should give the appropriate first impressions.

The design began with the focal point of the entrance, the reception desk. The concept for which was a monolithic concrete block that would be split, illustrating the two distinct workforce types. The desk includes a recessed Network Rail logo in black and a faux board form concrete finish. To introduce warmth to the desk, timber was used for elements where users would interact with it. The surrounding finishes then played off the industrial railway theme. For example, the carpet resembles sleepers and track ballasts, whilst the glazing manifest had railway imagery with an overlay of shipping container textures.

I learnt so much from this mini project, working closely with the joiners to create a hollow concrete desk which looked solid. Tough decisions were made during the construction phase and I had to ensure that this element of work was completed within budget and on time. Taking part in such a project has been hugely beneficial as it became an important learning tool for future projects.

Shortly after the handover for Edinburgh, I was asked to design another reception. This time for a head office in Cardiff. The Parti[1] for the office was the Welsh landscape, with the reception desk again being the centre point. Taking all that I had learned from Edinburgh, the desk's concept was a biomorphic[2] timber form which looked like it had been eroded by the surrounding blue water-like carpet. Using such materials resulted in the reception being grounded, natural, warm, and inviting.

It is only years later that I realised what a risk it must have been letting such an inexperienced designer create such a key element of a scheme. I am forever grateful for the opportunities as it allowed me to learn through experience whilst also giving me the freedom to design. Although mistakes were made and some lessons were learnt the hard way, it is an experience I will never forget.
Cynically, I assumed that most students go through their placement only being utilised as a CAD technician, with the occasional site visit thrown in. Placement students on the face of it are inexperienced and inexpensive labour, but they are so much more. They have an untapped creative resource, unrestricted by regulations and standards, untainted by the industry. They represent the future of Architectural Technology and I believe we can give them a better experience if we follow a different philosophy and allow them the freedom to design. ■

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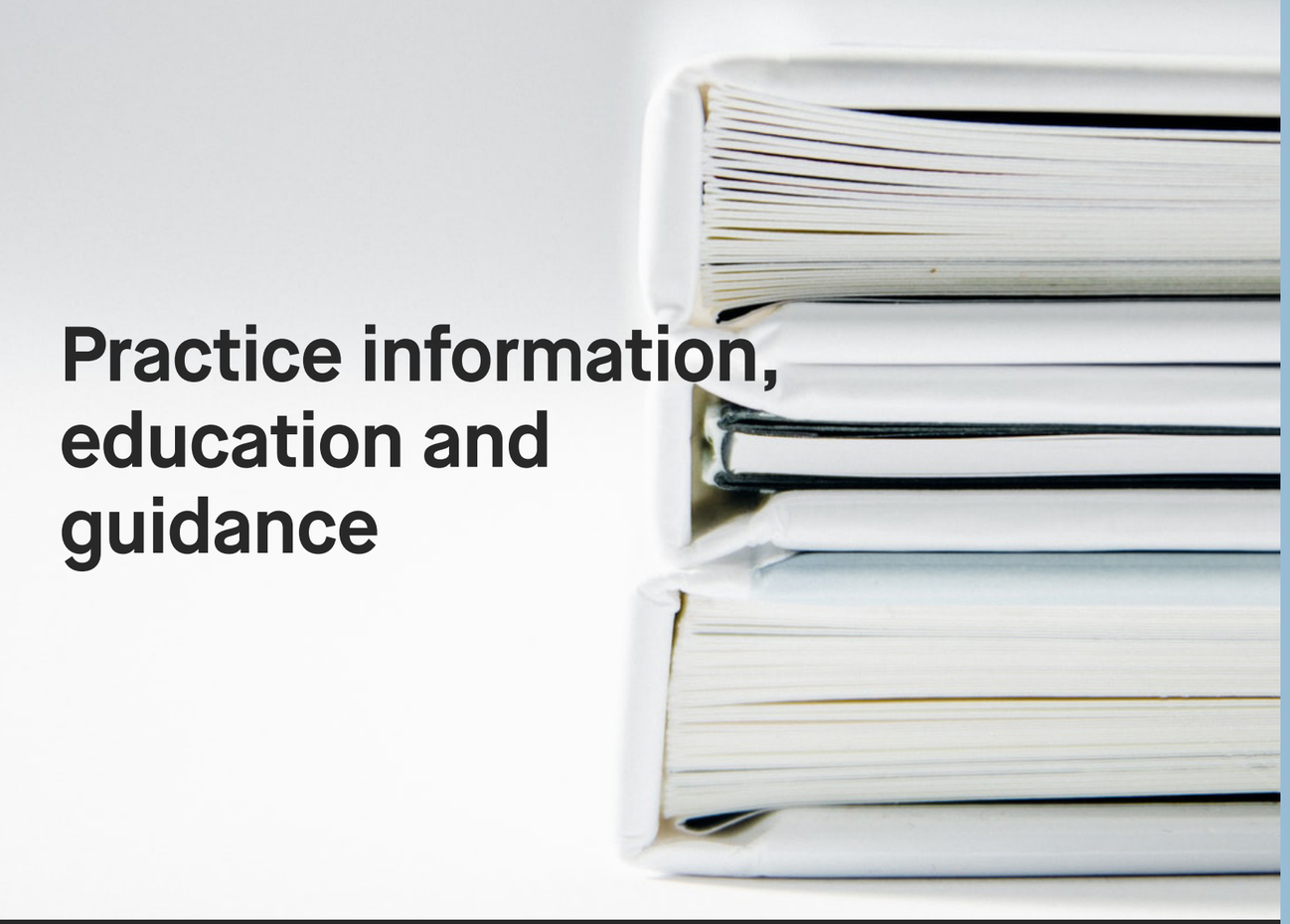
[1] *Parti Pris (Parti)* – an organisational thought or concept for a design
[2] *Biomorphic* – designing with naturally occuring element, patterns and shapes

© Martyn Riches ACIAT

The completed reception desk in Cardiff

© Martyn Riches ACIAT

The completed reception desk in Edinbrugh



Practice information, education and guidance

Ever wondered what kind of documentation the industry uses? Are you undecided as to whether you would like to be an employee or run your own business after your studies?

CIAT has prepared documents for you to use as an educational tool to help you understand your roles and responsibilites as a practising Architectural Technology professional.

Please visit architecturaltechnology.com, log in to the My CIAT area and select *Practice information, education and guidance*.

CIAT

I think I need a Mentor to Mentor Me in improving my Mentoring

Words by Nick Chapman MCIAT, Director, TNM Architecture

Having over the last few months joined CIAT's Mentor Match Me programme, I am trying to take the time to jot down a few thoughts that have come to mind whilst talking to Mentees and also to give a little straight talking, Black Country style, offering a guiding hand to anyone who is unsure of attempting the membership routes available through CIAT or to anyone having any sort of issue in architectural practice.

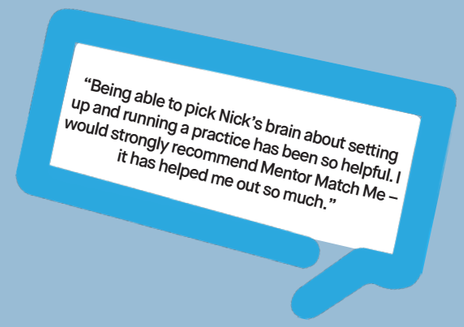
Let's get this straight from the off. Mentoring for the Institute isn't a paid job, I do it for the satisfaction of helping others, nothing more. Yes, I may not get every answer to every individual's specific membership route correct, but I know where I can find the answers for you. It's not only a mentoring process about filling in forms to help push you towards the Chartered Architectural Technologist, MCIAT status via Professional Interview, it's more of a holistic process where we can discuss most things that are career related. (No, I can't ring your boss to ask for a pay rise!)

Looking back over my last 32 years in architectural practice, I certainly feel that I have a lot of experiences to draw from and can offer advice on anything related to Architectural Technology in some form or another. I have been the office junior, done the late nights worrying about a detail I didn't understand (they usually look different the next morning with a fresh pair of eyes) – if you have worries that you need to discuss away from the office – Mentor Match Me offers that outlet.

A lot of us have been having a tough time in one way or another at the moment. If someone can help with a friendly ear, why not take up their offer? I can't offer tea or biscuits currently, but buy your own and we can have a virtual tea party on a suitable software platform.

If anyone is interested in the CIAT Mentor Match Me scheme, put yourselves forward for a potential match local to yourself at ciat.mentormatch.me.

Here are a couple of comments emailed through from some of my current Mentees:



Finally, remember, mentoring is a two way thing. I get as much out of it as you, just keep the rules simple – try to keep to any appointments we make, no shouting and obscenities are allowed from anyone, apart from me.

Stay safe. ■

Biophilic design, livable cities, conservation and technology: a selection of work from the University of Derby

Words by Dr Eleni Tracada, Senior Lecturer, School of Built and Natural Environment, University of Derby

Dissertations from 2019-2020 of students in BSc (Hons) Architectural Technology and Practice have been hailed by moderators as excellent pieces of work. In fact, most students on the programme showed an exceptional performance in academic research, analysis, discussion and evaluation of findings.

The expertise of all tutors and supervisors in our team offers an opportunity to students to propose and explore topics which are always really challenging but enjoyable to study. They have always praised the support and advice they receive from us, which is extremely encouraging and makes us very proud. Without any special order or preference, we try to describe a few of our students' endeavours in brief:

Impact of Urban Regeneration in contemporatry cities. How Urban Regeneration could improve citizens' wellbeing and their interaction within the city of Derby
Joseph Butler ACIAT

In his abstract, Joseph affirmed:
"The wellbeing and safety of citizens in Europe is currently on many governments' agenda, with a significant rise in concerns for mental health and environmental sustainability. This study would examine urban regeneration with the aim of discovering if concepts successfully implemented in cities such as Copenhagen can also be applied to Derby. Analysis demonstrated that the interaction between people and public space influenced their wellbeing and safety. The paper concludes that as citizens of different cities have the same basic needs, the ideas successfully applied to Copenhagen et al. could be applied to Derby. Consideration needs to be given to Derby's' relative size and being a smaller town, the results cannot be mirrored."

Joseph's love of author Jane Jacobs led to a reference of her publication *Death and Life of American Cities*, confirming:
"One of the revolutionary insights in the book highlights the limitations of town planning, with rigid plans that may look aesthetically pleasing from above but provide very little integration between buildings and people. The publication shares the possibilities of creating cities that are safe, interesting, economically viable, and that people want to live in and be part of."

Joseph came across Danish designer Jan Gehl's work in Copenhagen and Brighton in the UK. As I had known Jan Gehl for many years, I managed to get him to accept an interview by Joseph during his visit to the city just before the first lockdown. Joseph asked Jan his vision for the upcoming decade. Jan replied:
"Increasingly, we are met with demands that we must make more sustainable cities, walk more, cycle more, drive less; of course all of this is something which addresses climate change and we feel pressure to do something for the people. We also have increasingly been told by doctors that we should make city plans that allow us to move our muscles as much as possible, improving health and reducing costs. For 50 years we make cities that invite people to sit as much as possible, with drive in cafes, drive in banks – this is called the seating syndrome, which makes people live shorter lives and become an expensive burden on the health systems."


Joseph (right) meets Jan Gehl (left)

Happy City – The Best Principles in Urban Planning to Promote Human Health, Wellbeing and Environmental Sustainability: The Most Effective Principles for The Regenerations of Contemporary Cities
Ruth Briscoe

In her abstract, Ruth asserts:
"Modern urban life is associated with stress, poor social connectedness, exposure to environmental threats and the degradation fo the climate. Pedestrianised public space can help mitigate climate change, whilst promoting physical activity, health and wellbeing. It also revitalises public space which is vital for community strength and social cohesion. The addition of green infrastructure helps to improve the environment, biodiversity and reduces mortality and morbidity whilst boosting mental health. This study briefly summarises the history of urban planning to understand the problems faced today and how to mitigate them. Case studies of Copenhagen and a regeneration project in Nottingham demonstrate positive results achieved where urban planning methods have been implemented."

Ruth also admired Jan Gehl's work in Copenhagen:
"Limited space, obstacles, noise, pollution, risk of accident and generally disgraceful conditions" are the norm for city dwellers in most cities in the world (Gehl, 2010). This has reduced pedestrianism as a means of travel and has also squeezed out the social and cultural functions of city space. The conditions for urban life and pedestrians are becoming less diginifed each year."

As a main case study, Ruth used Lenton Gardens regeneration scheme in Nottingham; she explains the exemplary urban planning practice by referring to the interview she carried out with Clare San Martin, head urban designer of this project. Ruth writes:
"At the entrance of the new development there is a cinema, a Sainsburys, a cafe and a comprehensive bus service opposite. This is a great opposition to urban sprawl where a sprawl of only housing is usually found with no amenities or public transport within close reach. The cafe is an unsual touch for new developments within the UK. It is clearly visible when approaching or leaving the site and is essentially a community hub. Inside, people of all ages and groups were engaging in social activity. Head urban designer Clare San Martin (2020) explained that residential areas need to have their centres too. They cannot just be a sprawl of houses; they need their own centres and places where people meet, and within walking distance. This public life was created at Lenton Gardens."


© Medium.com
Pedestrian street in Strøget, Copenhagen

Ruth concludes:
"Urbanity has reached a critical state in need of intervention to sustain city living. Planning authorities must accept that positive change is required. Therefore, I would recommend a change in urban planning regulations, to make pedestrianism, cycling infrastructure, fully comprehensive public transport, improved conditions for public space and green infrastructure a fundamental requisite of all planning policies and developments.
Investors and governments must consider the benefits of planning methods regarding sustainability, the environment, mental and physical health, the boost in economy and reduced healthcare costs, which justify these implementations and far outweigh the draw backs of time and cost.
Robert Freestone (2015) rightly said urban planning must be "chameleon-like"; it must adapt to its time, society, environment and situation – new planning procedures will create the positive changes needed for the societal and environmental changes of the present day."


© Ruth Briscoe
Pedestrian paths with plenty of space spread around the site

Retrofit Biophilic Interventions to UK Housing Stock to Improve Occupant Wellbeing: A Study Using Photo Elicitation
Karaan Sabherwal ACIAT

Karaan had the opportunity to interview experts in Biophilic design and authors, such as Professor Nikos Salingaros, author of many books and articles in Biophilic Design and Biourbanism. He also analysed and discussed relevant case studies, such as social housing regeneration schemes Bow Cross and Oval Quarter in London. Karaan said:
"The Grosvenor Estates Parklet is a tactical Biourbanism intervention and was chosen because it is an example of a retrofit project with minimal

construction impact and is in a prominent location viewed by residential properties and residents in circulation. It forms part of Interface's biophilic tour of London and is described as 'nature-inspired'."

In his abstract, Karaan affirmed:

"Biophilic design creates environments that foster meaningful connections to nature, promoting health and wellbeing. This study's aim is to identify biophilic strategies that engender a visual connection to nature to improve occupant wellbeing in a residential context. A photo elicitation study was undertaken to analyse the effectiveness of the identified biophilic attributes for improving wellbeing and fostering human-nature connections. The results were triangulated, identifying that strategies incorporating biodiversity, fractal geometry and organised-complexity – within real or simulated views of nature – create a visual connection to nature and are effective at improving wellbeing.

Design strategies in built form incorporating fractal geometry and organised complexity were also found to be effective. The presence of water, standalone or in conjunction with these attributes, is beneficial but its practicality for retrofitting is limited. The coherent use of colour can improve wellbeing, however the effect of specific colours depends on the individual, so the wellbeing impact on occupants is variable suggesting occupant design input is crucial."

©Karaan Sabherwal

Retrofit intervention to create Grosvenor Estates Parklet

> "Our intention is to show that in Higher Education, students and near future professionals are considerate to issues of urbanisation and its impact on wellbeing"

Our intention, readers, is to show you that in Higher Education, students and near future professionals are considerate to issues of urbanisation and the impact this has on health and wellbeing. They have all carried out extensive research and interviews to be able to make recommendations for future resilient and happy cities. At the University of Derby, we are currently dealing with more projects focused on important topics to help policymakers understand that urban transformation needs common efforts by communities, local authorities, industry and universities working in collaboration. ■

Attribute	Level of Presence	Notes
Presence of Biodiversity	2	Trees, varied shrubbery, forbs and grass present
Presence of Organised Complexity	2	Inherent organised complexity of the diverse planting incorporated, details of bordering and spatial organisation of beds
Presence of Fractal Geometry	1	Presence of trees (both within spaces and linearly lining the circulation spaces), geomtry of planting beds used to incorporate scales of geometry into green spaces
Presence of Vegetation	2	Varied and diverse planting
Presence of Animals or Fossils	1	Birds (viable and audible) and insects
Preferred Views & Vistas (Savana Analogue)	1	Grass combined with shrubbery and trees, however no water, and some trees are isolated rather than copses and proliferation of hard landscape bisecting spaces mitigated the presence
Representations of Nature	0	None present
Presence of Curves	0	None present
Presence of Water	0	None present
Coherent Combinations and Variety of Colour	2	Plants of varying hues, both between plants and withing individual plants, most paving with earth tones and hues with varying intensity of hues within it
Opportunity for Sustained Visual Connection	2	Looked upon by communal spaces of new and refurbished blocks of flats, located adjacent to main circulation spaces

A sample table from case study evaluation according to Biophilic patterns' index for health and wellbeing

Collaboration is key at University of Westminster

Words by Charlotte Barker, student member and University of Westminster

In November 2020 and February 2021, AT3 (Level 6) students from the University of Westminster studying Architectural Technology and Interior Design took part in a Mental Health and Wellbeing Design co-production workshop with Medical students from Imperial College London. Meanwhile, AT2 (Level 5) students have been collaborating with Southwark Council's Regeneration team to address social and environmental issues in Peckham.

The workshop involved 100 members of staff and 640 students working in groups comprised of students from both universities and the different disciplines.

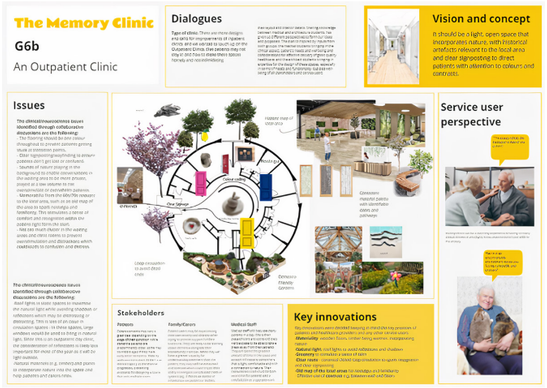
The project was a part of final year students' Professional Practice module, where we are required to reflect on the experience as part of our Reflective Essays. It brought together the students to design spaces such as clinics, areas in hospitals, and mental health centres, to address the needs of patients with one of the four assigned mental health conditions: Dementia, Family Therapy, Adult Psychiatry and Neurodevelopment & Autism.

Tasks included devising ideas, collecting precedent images, researching, and model making. Finding ways of explaining to medical students concepts that, as Architectural Technology students, we are very familiar with, was interesting. Equally, understanding how our proposed designs can affect individuals using the space on a daily basis was eye opening.

For our final output, each group created a poster incorporating our design ideas and the thinking behind them.

We then presented our posters to a panel of experts, including designers with experience of creating spaces for the various medical conditions; teachers; carers; and physicians. A few of our AT students were part of the winning teams and all winners were given the opportunity to make a donation to a mental health charity of their choice.

After taking part as an Architectural Technology student, I now have a better appreciation of the importance of an interdisciplinary approach to achieve an effective design. By working with and hearing the thoughts and needs of those using the space, the design becomes much more intuitive, useable and clever. By designing in this way from the outset, the need for retrofit and adjustments of the spaces are avoided. This project will certainly influence the way I approach projects in the future.



Winning posters showcasing an outpatient clinic for those affected by dementia and a centre for neurodiverse children (left)

BSc (Hons) Architectural Technology students are collaborating with Southwark Council's Regeneration team to empower communities and address social and environmental issues in Peckham.

The AT2 (Level 5) tutoring team organised a collaboration between Southwark Council's Regeneration team and students on the Design Project modules, where they are exploring Peckham through various methods of community engagement, a process which ensures that the local communities who will be affected by any developments have a voice in the process and can input their opinions and ideas.

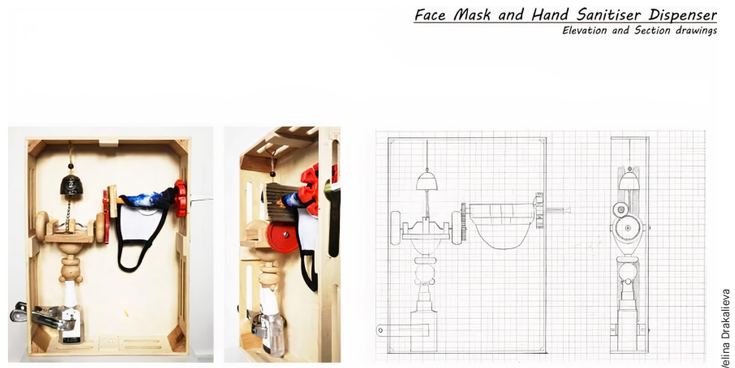
Peckham is known for being a very multicultural area, with over 70% of the population being Black or Asian, leading the students' research to focus on underrepresented demographics in the area. In the context of racial and social inequality and climate injustice, they have been exploring research questions such as: what are the effects of gentrification in the area? In the context of health inequality, how are the communities suffering disproportionately affecting the low-income communities living in high risk areas?

The students' projects propose design interventions that respond to the communities' needs at key civic spaces in Peckham town centre, such as Peckham Rye Station and Peckham Square, with initial research and design briefs also focusing on investigating urban infrastructures that aim to coexist with the natural and built environment.

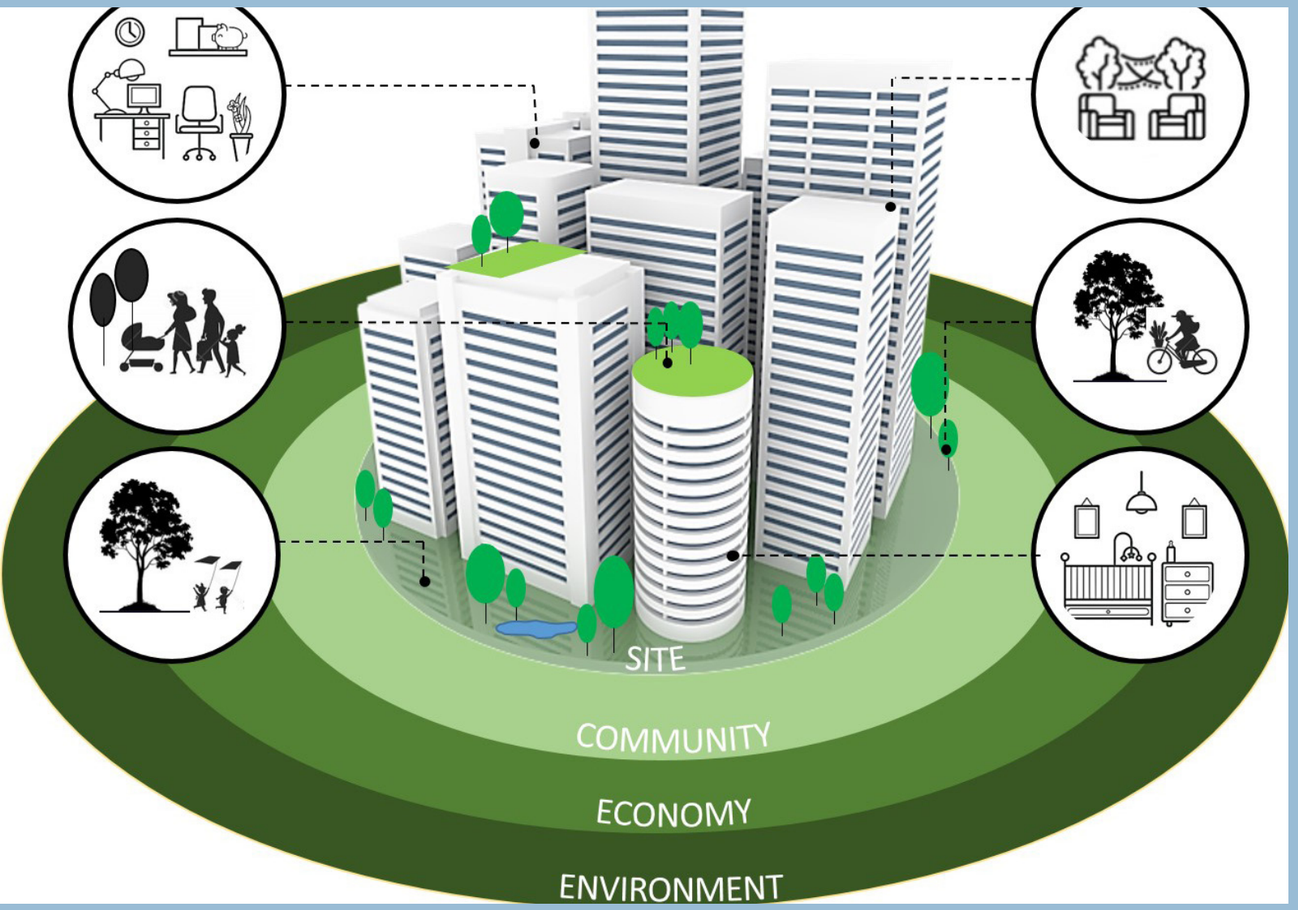
The students' findings from their community engagement work in Peckham has been translated to visually represent the research with architectural mapping drawings. They have also produced short films about Peckham and the current issues that communities in the area are facing during the pandemic.

At the end of December 2020, students presented their work to the Regeneration team, generating important and interesting discussions about community engagement and the role of the council, members of the community and others in this process.

This experience has been invaluable to the students' development and experience in acquiring important skills and resourcefully implementing ways to tackle social inequalities and climate crisis, and they will continue to collaborate with Southwark Council, with plans for presentations and an exhibition of the students' work at the end of the academic year to the communities in Peckham. ■



Images of student work



The Power of the Space (we create and inhabit)

Words by Arushi Malhotra, Assistant Professor & Program Coordinator, School of Design & Architecture, Manipal Academy of Higher Education

Four walls and a roof provide us shelter, safety and support productivity. At their best, they create the spatial presence that enriches people's experiences, improves lives and supports health in unprecedented ways. Apart from providing comfort, can our rooms, homes, and buildings give us meaning and purpose? Do they help inspire and sustain us? Can space protect and heal us?

Space is often an important protagonist in an individual's life. While the concept of shelter is fairly simple, architecture has always been more than just the built environment. Buildings around us are shaped and influenced by the climate, location, locally available materials and technology. From residential to commercial, institutional to monumental, buildings stand proud as a representation of the people – reflecting their beliefs, values, successes and downfalls, rulers, experiences, events, economic status – thus making architecture a part of our culture.

The effect of architecture on people and society is far broader, for buildings have ripple effects. Beyond its walls to the immediate site, community, economy and environment, these ripple effects can go on for a very long time. Buildings take years to build and stay around for decades and sometimes centuries – so the impact they have on the world around and within them lasts for many lifetimes.

Role of designers

While designing spaces that meet the functional, social and spatial requirements of its users is important, it is crucial to build a space that resonates with them on a subconscious and emotional level as well. Although it is difficult to quantify the connection that individuals have with well-designed spaces, there has been enough evidence and research to imply that architecture affects people on a deeper personal level. It has a profound impact on its occupant's mood, productivity, physical and mental health.

Spaces do not just evoke a physical but an emotional experience as well. It is what we see, smell, touch and do in these spaces that evokes the emotional response in us. If we break our experiences (both good and bad) into their smallest controllable parts, the results indicate that spaces have always had a physiological impact on us. While sterile, concrete, dense hardscapes have been proven to increase stress levels in its users, natural, green, open and aesthetically pleasing landscapes and spaces help people feel more relaxed, happy, connected and engaged. It affects people's ability to imagine and motivates them to live a more productive and fruitful life.

Architecture has always been closely intertwined with sociology, psychology, economics, politics, health and more, but as designers we often forget we are working around some crucial human rights while we design and alter the physical realm. Out of the 30 basic human rights, there are at least eight of them which are directly affected by the kind of spaces we create and the impact that they have on people and its users. These are:

- **Right to Life (to live in freedom and in safety)**
- **Right to Equality (to not be discriminated)**
- **Right to Privacy**
- **Freedom to move (around freely)**
- **Right to seek a place to live**
- **Right to Public assembly**
- **Right to Social security (right to affordable housing, medicine, education and medical help if we are old or ill)**
- **Right to Play (right to rest from work and relax)**

Currenty, we are undergoing an existential moment in our relationship to the built environment, where this pandemic has made us realise that the space around us has the potential to threaten our existence. While our healthcare centres, hospitals etc. are designed to mitigate diseases and infections, our homes, workplaces, institutes, market places, restaurants, and parks are not designed to manage disease transfer. Suddenly, the relationship that we have with our spaces changed drastically – where we are careful not to touch the surfaces, avoid interactions in crowded public spaces, stay indoors or are more cautious and aware of our indoor air quality.

Spending a lot of time indoors has caused a shift in the fundamental requirements of our space as well. The way in which we behave and interact within and with our spaces has changed. It is in times like these that the responsibility on designers increases significantly. There is now a need to tap on the power our spaces have to 'heal'; and adapt, design and create spaces that not only meet the functional and aesthetic requirements but are 'healthier' spaces that provide physical and emotional comfort alongside a safe environment to work and live. ■

> "Spaces are canvases for interactions. They are the the frames and lenses to understand our place in the world."

Reflecting on tech – What's in the toolkit?

Words by Stuart Cudmore MCIAT, Director, Munday + Cramer

Not so many years ago, a designer's toolkit would comprise of a Rotring pen set, Staedtler clutch pencil and a product manufacturer branded (freebie) scale rule. For some, it still does. However, from hand-drawn designs to the use of 3D modelling and CAD, technology and innovation have transformed architecture.

We've moved away from the 2D space and stepped into a world of endless possibilities with virtual reality and 4D visualisation for the most advanced rendering and visualisation.

Munday + Cramer are a CIAT Chartered Practice who are celebrating their 40th anniversary this year. Having moved to CAD in 1990 and 3D modelling in 2000, they have always been quite progressive as a smaller-scale practice. Head of Architecture, Stuart Cudmore MCIAT, reflects on the evolution of Architectural Technology over the past few decades, from the methods they used when the practice was first established to the technology that is now embedded into an AT's toolkit today.

Remote sensing

Some of the most classic examples of technology in architecture are the various methods of remote sensing. One of these examples that has progressed most in recent years is LiDAR. Capable of building high-resolution Digital Terrain Models and Digital Elevation Models, LiDAR is advancing rapidly. Now with 4K imagery and high levels of manoeuvrability, it is useful for construction mapping, detailed geological surveying, and ground investigation. Perhaps the most interesting development is, LiDAR is now available on the iPhone. This is not to suggest that architectural firms around the world drop everything and start working from their phones, but the increase in accessibility, portability, and decrease in price for this technology is very exciting indeed.

Sustainable development

With worldwide construction output expected to increase by 85% into 2030, the demand for sustainable practices increases each day. In the age of the Anthropocene, sustainability must be at the forefront of our minds. From buildability to procurement and from scheduling to project management, Building Information Modelling (BIM) offers us a solution to the lesser-known impactful activities of the industry. Our carbon footprint can be reduced by streamlining workflow and timelines, reducing waste, and minimising unproductive on-site time. All of this can be scheduled and managed with BIM; allowances can even be made for curing and drying time.

> "Building Information Modelling (BIM) offers us a solution to the lesser-known impactful activities of the industry. Our carbon footprint can be reduced by streamlining workflow and timelines, reducing waste, and minimising unproductive on-site time. All of this can be scheduled and managed with BIM; allowances can even be made for curing and drying time."

Smart and emerging technology

From smartphones to smart fridges, it seems like there isn't anything left to get a 'smart' upgrade, but in an industry where engineering makes up a large part of operations, any opportunity to update and innovate should be welcomed. It's been great to see the leaps and bounds innovation has been taking in recent years. For example, smart glass, or switchable glass, can allow residential builds differing levels of privacy and can allow the occupants to be more energy efficient. Recent uses can be seen in the Boeing 787 Dreamliner, opting to switch pull-down blinds for switchable electrochromic glass. However, smart glass for instance has been around for a while but isn't widely used in buildings as of yet. Perhaps it is something that is becoming more viable and affordable for wide scale use.

The world of augmented, virtual, and mixed reality, known together as extended reality (XR), is becoming more and more intertwined with our own, and we can find cases for using it daily. One in particular that stands out is ArchiCAD as it is BIM compliant and has facility for clients to review designs on their phones/tablets in virtual reality (or VR headset). These types of tools are becoming more and more widespread in the world of architectural design, as they can decrease your carbon footprint through planning, save money in wastage, and have the chance to showcase the project to investors and clients.

In conclusion, collaboration breeds innovation. Cloud-based collaboration, whether that be through a tool like ArchiCAD or through open access forums for new innovative designs, is the future of architectural innovation. This, coupled with a continuing development in other areas such as remote sensing, can make our progress in these areas near enough exponential. ■

The AT Suite

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