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Ascend Studio
15-17 St. Cross Street
London EC1N 8UW

Editor

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

Advertising

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

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 London, EC1V 1NH UK
 ciat.org.uk

Online

/Chartered Institute of
 Architectural Technologists
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President

Alex Naraian PCIAT
 president@ciat.org.uk

Chief Executive

Francesca Berriman MBE HonDTech
 berriman@ciat.org.uk

Practice & Technical Director

Diane Dale
 diane@ciat.org.uk

**Education Director &
 International Director**

Tara Page
 tara@ciat.org.uk

Membership Director

James Banks
 james@ciat.org.uk

Printing

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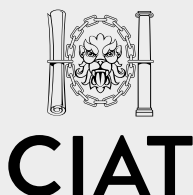
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Winner
2019

THE CHARTERED ARCHITECTURAL
TECHNOLOGIST OF THE YEAR

Oliver Henshall MCIAT

Words by Grainne Duffy, Powell Dobson Architects

Oliver's passion lies with helping others succeed. He continues to push the boundaries of what the industry expects from a Chartered Architectural Technologist, not just in the form of technical and architectural design delivery, but soft skills, attitude and engagement.

He is the driving force for the development and growth of his peers, whilst paving the way for others to follow, by climbing the hierarchy within Powell Dobson to become a Technical Associate, before the age of 30.

Oliver is also an Ambassador for the Architects Benevolent Society (ABS), a role which exposes him to the wider architectural family. It allows him to keep a finger on the pulse of the industry, assessing the areas of the sector that need addressing and ultimately keep the people behind the pencils enthused, protected and engaged in the fantastic world of Architectural Technology.

Oliver's character fits into a variety of moulds. On one hand, he is fiercely ambitious, proved by his fast progression within Powell Dobson. Hard work, dedication and an ability to self-assess his most recent experiences and interactions mean he is able to grow and develop to adapt to new situations and challenges. A good understanding of empathy and the ability to read a room also provide Oliver with the fundamental core competencies critical to building successful relationships, that so often are missing in young professionals today.

In contrast, Oliver is better known by his peers, colleagues and clients for his relaxed, collaborative and inclusive qualities. The terms 'teamwork' and 'collaboration' are embedded within all working environments, not just the built environment sector, however Oliver's character is fundamentally forged to sit within a team, guiding and mentoring where applicable, whilst striving to learn from his mentors in the practice. He sees the value that can be achieved by listening and acting on advice, but also has the appreciation for the time and effort colleagues give him. In essence, Oliver is a 'people person' which is a key quality both within the office and externally.

Day to day, Oliver is responsible for the smooth running of several large-scale projects, varying from high end residential, national house builder schemes and his speciality, animal welfare projects. Oliver has

a rather 'traditional' job description within the built environment field, more often than not, acting as the lead consultant, playing a pivotal role in project and design management for his schemes. He is responsible for his team's workload as well as their personal and technical development, alongside organising and coordinating sub consultants and specialist designers, whilst meeting client's expectations and tight deadlines. His responsibilities also include developing the drawing packages and specifications with his close-knit team on a day-to-day basis, looking for ways to improve and develop with every package, using his experience in using and implementing BIM over the last ten years. Oliver has a very collaborative outlook on running jobs, both with his own inhouse team, but also the talented engineers and specialist designers he regularly gets to work through challenges and designs with. Complimenting Oliver's traditional 'external' role, he is also responsible for elements of management internally.

Oliver is better known by his peers, colleagues and clients for his relaxed, collaborative and inclusive qualities



As part of the practice, Powell Dobson's 'Overall Technical Strategy', Oliver has been responsible for developing the 'technical progression and recruitment' side of the business. Core competencies and 'technical' roles have been reviewed and rewritten to compliment the new generation of Architectural Technologists coming through, but also to ensure the practice has the key skills and knowledge in place to deliver ever more challenging projects.

Oliver believes the role of a Chartered Architectural Technologist is in a stage of transition at the moment. He wants to create a structure and line of progression through what was once a glass ceiling in the sector. This is something that is essential for the next generation of Architectural Technologists in the future. Hard work to re-write the rule book now will hopefully pave the way for people with the right talent, drive and personality.



Powell Dobson fully support and understand this line of thinking, the next step is to bring this to the rest of the sector, which Oliver has already started to do.

Oliver's main specialist skill set lies in animal welfare design. Producing layouts, large masterplans and robust designs, time and time again that allow for animal and human integration. It is a skill that has been honed over many years and projects. Oliver is currently working with the Dogs Trust on their Cardiff Centre (his sixth project for the charity) and the Dogs Trust's 22nd centre in the UK. Oliver has had further commissions with Powell Dobson, to look into two additional projects for the charity, one in Belfast and the other in Sarajevo, Bosnia Herzegovina.

In addition to his animal welfare design work, Oliver has been involved in several low energy, sustainable projects. His dissertation during his final year at Cardiff Metropolitan University was written on the PassivHaus principles and their integration into the UK housing industry. Oliver's passion for low energy building design led him to design his parent's house after graduating. The family home was completed in September 2011 and built using the PassivHaus principles, putting his research and newly acquired knowledge into good use. Since this initial project, this passion has been applied to many other schemes Oliver has worked on. Elements of the Dogs Trust projects have been designed and built with exceptional air tightness and insulation levels, benefiting from mechanical ventilation heat recovery systems and a dramatic decrease in energy output for the centres. Most recently, Oliver spent many months presenting the PassivHaus concept to one of his house builder clients. Proving the science, and benefits set to be enjoyed by the eventual house owner, Oliver's client agreed to progress and construct four fully certified PassivHaus units within the current phase of works, with a further eight units being commissioned

for the final phase next year. Oliver was able to pull from his knowledge and experience, when initially pitching the idea, and consequent queries and comments being answered and explained throughout the brief building process. Working alongside one of Powell Dobson's Directors, who is a certified PassivHaus Designer, Oliver is developing drawings and specifications ready for a start on site commencing in the summer of 2019.

Oliver has experience working within all stages of the RIBA Plan of Works and regularly works with clients to develop briefs and design programmes for small and large schemes alike. During the early inception stages, site feasibility and general planning advice, teamed with the technical experience gained over the years allows Oliver to guide his clients to a stage where a concept can be realised. This experience ensures that the early designs allow for eventual buildability, as well as a seamless transition, to initial statutory approval and an appreciation of health and safety. As outlined above, Oliver has the ability to develop and build on a design. Hand drawn sketches through to detailed drawing packages produced using AutoDesk Revit are co-ordinated and shaped whilst collaborating and developing ideas and concepts with the design team. It is Oliver's responsibility to lead this process, keeping the client and statutory contacts in the loop as the process takes place.

The best way to demonstrate Oliver's excellence in fulfilling the role as a Chartered Architectural Technologist and Technical Associate for Powell Dobson, is the fact that clients continue to return and request that Oliver is to act as their lead consultant for the delivery of their projects. By creating an inclusive, relaxed but ultimately engaging environment for a design team to work in, he gets the best out of people, time and time again. ■



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As you may appreciate, the Grenfell Disaster and other matters affecting the insurance industry have caused significant shifts in the insurance landscape for construction professionals. The majority of insurers have used the tragedy as a catalyst to impose immediate and dramatic alterations to the cover available, which has included:

- withdrawing from the market completely;
- offering cover at much-reduced limits, or imposing Aggregate limits of indemnity;
- substantially increasing premiums with no justification;
- implementing onerous and unnecessary terms, exclusions or restrictions.

From an insurance perspective, the situation is bleak and, unfortunately, things will get worse before they get better. In light of the current insurance market conditions, ensuring you deal with a specialist insurance broker such as CIAT Insurance Services is paramount in getting the right advice and guidance.

A little light in the dark

CIAT Insurance Services, in conjunction with CIAT and Insurers, have taken steps to try and limit the impact that the shifts in the market will have on Members. Unfortunately, while we've been able to provide some shelter from the turbulent market conditions, no one can completely escape the effect of recent events.

The shifts in the insurance market will impact on CIAT Members in two ways. For some smaller practices, a number of you will have noticed an increase in the premiums being charged, although we are managing to maintain reasonable levels compared to the increases sought by other insurers. The second impact is a shift in the way Insurers consider the risks that could arise out of previous work. As a result, Insurers will be looking to obtain further and more detailed information about past projects, especially anything concerning cladding. To effectively manage this, given the nature of the services your practice may provide, we have adopted a two-stage process. The first step is contained within the proposal form, which includes questions about the type of work you have undertaken. Depending on the answers on the proposal form, additional information may be required.

If further information is required, as claims can be made some time after the work is done, Insurers may ask for details on projects involving cladding undertaken in the last 15 years. While we can assist in determining what information may be required, we appreciate that this may not be a simple task. If you think you may need to provide further details, we would recommend that you start reviewing records as soon as reasonably practicable. Once this information is available, we will use all reasonable endeavours to ensure that there are no significant changes to the cover being provided under your Professional Indemnity policy.

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AWARD FOR EXCELLENCE IN
ARCHITECTURAL TECHNOLOGY

Beacon of Light

Words by FaulknerBrowns Architects

The first of its kind in the UK, the Beacon of Light is a unique community hub. It consists of engaging and interactive zones that host activities in education, health and fitness, sport and play and the world of work.

Dubbed a 'box of dreams', the building's stacked arrangement and distinctive colour-changing feature lighting creates the appearance of an iconic, shining beacon. It is visible from vantage points around the city, attracting the community and tourists alike. Located next to the Stadium of Light, home of Sunderland AFC, the Beacon of Light provides a vibrant and feel-good environment where people can meet socially, learn and take part in courses to gain skills and qualifications and where their fascination and love of football will start them on a journey to improve their quality of life.

Our design response to the brief was predominantly informed by the tight footprint of the site and the differences between the sporting zones within the

brief; the sports hall – a highly conditioned space with particular acoustic and lighting requirements, versus the football barn – a semi exposed area with no requirement for temperature conditioning. This led to the idea of separating these two elements and allowing them to manifest themselves as one heavily controlled insulated brick clad box and one simple, lightweight and translucent polycarbonate lid, with the shared facilities occupying the areas between and serving both spaces.

The design is both simple and cost effective. The building is made up of a 'kit of parts' including brickwork, polycarbonate cladding, curtain wall glazing and tensile roof fabric. Modularity within the design is key with the setting out based on multiples of 300mm which is ultimately manifested from the 60 x 60 metre footprint. Examples of this can be seen throughout the building. For instance, the brickwork is decorated with a series of 15mm deep linear recessed bands stacked in 900mm vertical increments. The principle has also been used to set out the door and window openings on the external façade (900mm x 4500mm window openings and 2700mm high door openings) as well as the acoustic wall panelling internally within the sports hall (900mm x 2400mm). Another prominent example can be seen within the polycarbonate cladding which is formed out of 18 metre lengths of 600mm wide panels.

The use of space within the building creates a sense of welcoming, aspiration and inclusivity. Features that have achieved this, include:

- The triple-height 'street', running through the building, facilitates visibility – engaging the interest of the community and passers-by from the outside and from within, across the multiple spaces, to encourage 'cross-participation'.
- A feature staircase constructed from a set of two single-span steel trusses, rises through all floors and is decorated with fun facts, calorie counters and inspirational quotes, encourages people to use it as their main point of circulation, increasing physical activity. This procession up the building is also a physical representation of the power of sport to enrich people's lives.
- Careful integration of the school into the building, allows access to the rest of the building, whilst maintaining appropriate safeguarding controls.
- Unique rooftop 4G pitches under a tensile fabric roof – an exceptional facility, supporting all-weather participation, that's proving hugely popular with footballers and sportspeople of all ages.

From concept stage, a steel structured solution was favoured, for its ability to deliver greater affordability, flexibility and a lower environmental impact of concrete alternatives (the carbon footprint of the steel frame is 10% lower than an equivalent concrete frame).

The structure and two-way spanning roof truss system, specially designed for efficiency and to minimise waste, has been key in enabling; the football barn's impressive 60x60m clear span fabric roof, uninterrupted column-free views across the indoor arena and the single-span feature staircase.

Our decision to use continuous 18 metre lengths of polycarbonate cladding panels without any intermediate breaks was a unique and unusual demand. However, the manufacturer and supplier were able to satisfy the challenge and the panels were delivered from Europe to site on flat bed transportation ensuring that they arrived in one piece and in pristine condition. It was imperative that the panels were of equal number and spacing to all four sides of the lid and that the width of the 'letter box' opening to the south façade was an absolute multiple of the panel width of 600mm ensuring no cut



panels to the sides. Working alongside the manufacturer and contractor, we were able to achieve this through rigorous setting out exercises taking into consideration tolerances and allowances for 'creep' along each façade.

The translucency of the polycarbonate cladding and tensile roof fabric allows natural light to enrich the indoor environment creating a sense of user wellbeing. A set of discreet PPC aluminium louvres wrap around the underside of the triangular edged roof structure and utilises passive measures, assisting in the natural ventilation of the football barn, delivering year-round comfort without increasing carbon emissions, resulting in energy-saving cost efficiencies. Automatically controlled daylight dimming and presence detecting lighting also maximises energy efficiency and limits carbon emissions throughout the building.

Since opening in June 2018, the Centre is already engaging traditionally 'hard to reach' individuals within its local communities – including people with physical disabilities and learning difficulties, unemployed adults, young people not in employment, education or training, and those disengaged from mainstream education. It is a destination that inspires people to achieve and a place that the community can be truly proud of. ■



Judges' comments

The Beacon of Light is a simple design solution with a unique approach, which is innovative with use of technology and materials. It is designed to minimise necessity for energy use and, with careful positioning in the design, achieves a reduction in energy loss. A fine attention to detail ensures minimum waste, a great use of space and effective buildability. The Beacon of Light is a very welcoming structure, socially positioned in a regenerated area for all those in the community, enabling support and creating opportunities. A fantastic scheme which demonstrates the very best in Architectural Technology with a coordinated design team approach and as such, is an outstanding winner of the 2019 Award for Excellence in Architectural Technology.



Highly
Commended
2019

AWARD FOR EXCELLENCE IN
ARCHITECTURAL TECHNOLOGY

Woodmansterne Secondary School & Sixth Form

Words by PTAL

Woodmansterne Secondary School & Sixth Form is a new five form-entry school providing 900 places for pupils aged 11 to 18 years old. The new building forms the second phase of the site redevelopment which previously comprised a two form-entry primary school with an associated nursery and children's centre.

In developing the massing for the building the programme was split into three elements – sports, specialist teaching and general teaching – each of which is identifiable as a distinct block in the L-shaped building. The constraints of the site, including entrance location, neighbouring properties and the layout and orientation of the adjacent primary school, informed both the shape of the building and the configuration of spaces within it.

The school was designed with functionality and inclusivity at its centre. With 900 pupils and 140 staff at capacity and community use of facilities outside school hours, the building has been designed to maximise accessibility for all parties and aims to make the facilities welcoming, easy to access and enjoyable to use.

The main entrance and building signage are visible from Woodmansterne Road, creating a visual presence for the school and forming a clear direction for pupils, parents and visitors. The spaces intended for community use – sports, studio, main hall, dining hall and library – are all located on the entrance level, creating a clear and easily-maintained line of security during community use hours. On the upper levels, the teaching spaces for practical subjects are arranged around the larger specialist block while the standard classroom spaces are stacked along the length of the general teaching block.

This process also enabled designers to coordinate the location and space requirements at an early stage to maximise the usable internal footprint



Corridors are over 2m wide to ease congestion at busy class change-over times and all cross-corridor doors are fitted with hold-open devices to remove obstructions. Colour contrast is considered throughout – walls are predominantly white, therefore dark grey elements are used to provide colour contrast, from floor finishes and doors to WC grab-rails and side-flanges to light-switch and socket faceplates on dado trunking.

The project team have worked to BIM Level 2 modelling requirements, with a federated model undergoing regular clash detection sessions during design development. The coordinated model proved invaluable throughout the design and construction phases for a range of purposes, from the creation of phasing and sequencing diagrams for the construction process, to virtual-reality walk-throughs with the staff and pupils. During design development the models were used to ensure the whole team were fully aware of the interaction between elements and eliminate any clashes. This process also enabled designers to coordinate the location and space requirements at an early stage to maximise the usable internal footprint and room height.

The contractor team was involved from stage three and the development of architectural details were carried out in close collaboration with the construction team and their specialist sub-contractors. Regular workshop meetings were held to target specific elements of the building where all parties had the opportunity to raise their thoughts, concerns and preferences on sequencing and buildability which fed into the final construction details. In addition to this, various off-site elements were incorporated into the design to improve the speed of construction, from pre-cast columns and shear walls to factory-manufactured insulated panels, with brick-slip facing to form the façade finish.

Sustainability, daylight and ventilation were important considerations in the development of the design to ensure that running costs are minimised and that users are provided with a bright and well-ventilated working environment. The thermal strategy for the building utilises the inherent mass of the concrete structure as a heat sink, to minimise unwanted heat gains during the day, along with a night-purge system; this helps to minimise both heating and cooling requirements throughout the year. Teaching spaces incorporate a grid ceiling to 65% of the room area, with an exposed perimeter of concrete around three sides. This simple but innovative design allows the thermal benefits of the concrete to be utilised, whilst the ceiling 'raft' provides the acoustic absorption critical to the spaces and forms a concealed void above, where building services can be located. Window heights were specified to maximise daylight penetration into classrooms and openable elements of the windows are opaque rather than glazed, allowing blinds to be lowered to minimise glare without interfering in the flow of natural ventilation.

Incorporation of photovoltaic panel arrays on the roof provide a renewable energy source for the building, with excess energy sold back to the grid, particularly during summer months when the school is not fully occupied. Low energy light fittings and appliances are utilised throughout to minimise the building's energy consumption, while water-saving sanitary fittings were specified to reduce water usage.

The building envelope was designed to achieve a high thermal performance, with U-values significantly lower than those specified in Part L. Combined with the thermal mass of the concrete internally, to reduce the temperature change during the daily cycle, and the passive and purge ventilation systems this will create a high level of thermal comfort, while the ability to independently control the ventilation in each room provides occupants with the ability to easily control the internal environment.

Durability of materials, products and detailing is essential in an education environment to minimise maintenance requirements and maximise life expectancy. The insulated brick-slip panels were selected for their speed of construction but also for their inherent robustness and whilst large areas of curtain-walling are used around the ground floor, the glazing specified is attack-resistant. Internal products and detailing are similarly robust and durable, with hard-wearing floor finishes, severe-duty partition build-ups and 150mm skirtings throughout.



Excellent working relationships amongst the team and ongoing engagement with stakeholders were key to the success of this project, which was delivered on time and within budget. The school opened in April 2019 to pupils in Years 7 and 8, previously taught in the primary school and adjacent temporary buildings, providing exemplary facilities for pupils, staff and the wider community. ■

Judges' comments

Woodmansterne Secondary School is a well thought out holistic design and scheme which demonstrates Architectural Technology at its highest level. PTAL maintained the functionality of the different spaces and the acoustic comfort was suitably considered. The School has a high-performance building envelope with exceptional functional and robust design and detailing. The lengthened design process to shorten construction worked to an advantage ensuring admirable layouts and an observed flow of the building.

Commended
2019

 AWARD FOR EXCELLENCE IN
ARCHITECTURAL TECHNOLOGY

Hawley Mews

Words by healycornelius design consultancy ltd

Hawley Mews is a development of three terraced houses on a very confined site in Camden, London. The successful delivery of the development demonstrated how the objectives of the Mayor's Draft London Plan 2017 can be met with the application of care and ingenuity.

Formally a car park, the site was surplus to Camden Council's requirements and was acquired at public auction in 2013. The total site area measuring 280m² was heavily overlooked by neighbours, a mere 7m from both boundaries which presented a difficult but exciting design challenge. Planning Permission was obtained by Goldcrest Architects in 2014.

healycornelius design consultancy was engaged to develop the technical design from receipt of planning permission through to completion and handover.

The first technical challenge, rather unusually, was to build a full-sized model of a single bay of the property (erected and removed in a single day) to demonstrate the actual massing relationship of the proposal to the adjacent buildings. The full-sized model demonstrated how the roof form is modelled and shaped to slope away from boundaries creating a respectful sculptural massing and volume to the adjacent properties.

The delivery of a high-performance development defined the goal, meeting with the Local Planning Authority's requirement for Code for Sustainable Homes – Level 4, also achieving a minimum EPC Rating B through considered specification of materials.

Each house is arranged around a private south facing courtyard, extending the open plan ground floor living space. Large glazed doors open onto the courtyard garden, increasing the sense of light and space with windows in all the rooms. A large opening sky light above the stair allows daylight into the depth of the plan and natural stack ventilation in summer. The staircase becomes a gallery space, library and home office. Each house is carefully detailed and designed to maximise light, space and storage.

The houses consist of two bedrooms on the first-floor level, one with an en suite. All comply with the Lifetime Homes Standards where an accessible WC is located on the ground floor, designed to convert to a level access shower room. Accessibility is maintained through the allowance for retrofit of a platform lift to the entrance from the front path as well as a through-floor lift within the house.

To reduce the scale and impact of the development, the ground floor was set at 500mm below ground level. This presented a challenge in terms of the depth of excavations and a redundant drainage culvert running through the centre of the site. A cantilevered foundation design was adopted which sat on two long deep trench foundations positioned on each side of the culvert. The retaining walls were constructed using concrete filled cavity blocks with type c waterproof tanking system installed to prevent moisture ingress.

A number of modern methods of construction for the external walls were evaluated to address requirements for a high-performance fabric, maximising floor area on the confined site and to meet the construction challenges of the restricted site area. The client preferred to adopt a traditional masonry method of construction. Accordingly, a 200mm autoclaved aerated concrete (AAC) block wall was selected using a thin-joint construction technique with 2-3mm special adhesive joints. External wall insulation (EWI) and a polymeric render finish delivered a u-value exceeding the minimum requirement.

This method of single skin masonry assisted in reducing the overall programme compared to traditional construction methods. When the project reached construction, a key raw material of the AAC blocks,





Each house has a bio-diverse living green roof to provide diverse plant communities



pulverised fuel ash, was in limited supply. To address this challenge, we sourced an alternative aircrete block which required a conventional mortar joint. Following analysis, the specification adjustment did not affect the u-value, however it had a slight impact on programme as traditional mortar joints were constructed in limited lifts.

The 200mm AAC blocks which were selected for the external fabric contributed to the sustainability rating. The thermal mass of the blockwork retains and emits heat into the internal spaces, the application of EWI with polymeric render delivered a performance above regulation requirements.

Each house has a bio-diverse living green roof to provide diverse plant communities, increase energy efficiency, minimise rainwater runoff volumes and enhance the appearance for those overlooking. Rainwater is harvested from the zinc roofs to a water storage tank in the courtyard to water plants etc.

Fire protection measures are implemented using a mist suppression system which statistically delivers a greater likelihood of survival in the event of fire. Mist suppression was a requirement to meet Part B of the Building Regulations.

The primary space heat demand is met by an energy efficient air-to-water heat pump serving underfloor heating throughout both floors.

A mechanical ventilation with heat recovery system is installed in each house resulting in controlled ventilation and negation of the requirement for trickle vents. Focused attention to detail ensured that the design of all junctions was carefully addressed resulting in an air permeability of 4 m³/h/m² @ 50Pa.

The bespoke folded metal screen, incorporating

the pedestrian gated entrance, defines the threshold between the public domain and the private realm. It is designed to be tactile, feel safe, secure and substantial as you move through it. Inspiration for the screen design was drawn from the historical use of Hawthorn trees to enclose land and the folds in the metal, which echo the texture of shipping containers, refer to Camden history as a transport hub in the era of the canal network.

The resulting abstract perforated pattern which echoes the Hawthorn reference is fully revealed at dusk when the back lit screen illuminates Hawley Mews and positively connects with the local street art. Careful coordination to balance the challenges of the fabricator, main contractor and the artistic guidance of the clients team was required to achieve the result. ■

Judges' comments

Hawley Mews is a neat and clever site design and layout. The scheme demonstrates the true flexibility of Architectural Technology with its innovative technical solution — a high quality solution for a constrained site, maximising natural light. The evidence of compliance with Planning requirements was managed in an innovative and transparent way and with a sensible approach. The fire engineered mist suppression solutions, to ensure safe results, overcome seemingly impossible site constraints.



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Winner
2019

THE ALAN KING AWARD FOR EXCELLENCE
IN ARCHITECTURAL TECHNOLOGY

New Dwelling House at Grange View

Words by Stuart Davidson Architecture

The client's brief was to create a contemporary low energy, accessible dwelling within a former walled garden, to nestle into the existing streetscape. Due to the limited mobility of the client, the dwelling had to be designed to allow for full accessibility without being obvious, as the site is surrounded on three sides with mature trees and a public road to the fourth – the use and deflection of light was paramount.

The site required to have two primary elevations with the formal public elevation designed to reflect the Victorian gabled frontage of the surrounding properties, using modern materials to put a subtle twist on the design. The ground floor has been designed to form a free-flowing family space, allowing each area to retain its own identity but remove access barriers which would be an issue to the client's mobility. The southerly garden facing elevations were designed to allow for maximum solar gains deflecting this into other areas of the dwelling and forming features inside with a fully vaulted entrance hallway.

Surrounded with historic lime trees amongst 30+ protected trees on site, particular care had to be taken to protect and preserve these at design stage ensuring they were not compromised now and in the future, this gave the benefit of the dwelling being set into an already mature setting. The property was designed with a limited frame structure, which allowed for continual bulk deliveries, as the site is located on a busy thoroughfare. Disruption was kept to a minimum with planned deliveries and installations carried out at specific times.

The site is adjacent to an anterior route as it is located within a former walled garden along with 30plus tree preservation trees (TPO). This meant that material delivery and movement were restricted and had to be managed carefully, along with the main contractor, to ensure that storage areas were maintained, as well as site access routes controlled and safely managed. Pre-planning at design stage was carried out to reduce impacts on public traffic flows with deliveries timetabled to non-peak times, as well as sub-soil removals being carried out at the same time as a large scale services road closure, allowing controlled removal to an adjoining site for landscaping works, ensuring the impact on landfill was reduced.

The overall structure was carefully planned with a main steel frame to the central core interacting with a timber structure infill to allow reduced and simplified movement on site. As mentioned, the building was specifically designed for our clients who have progressive mobility issues, we created this by large flowing open plan areas divided by specifically located partitions or doors which are DDA compliant. The structure around the feature stair was formed to be able to support any future chairlifts and the first floor pre-trimmed to future proof a possible future lift.

The structure around the feature stair was formed to be able to support any future chairlifts and the first floor pre-trimmed to future proof a possible future lift



The large 'living hub' area, sub divided by lowered feature ceiling area, ensures that the Mechanical Ventilation with Heat Recovery (MVHR) system is not compromised and controls airflow and optimum ventilation without structured barriers. The central 'hub' was designed as the central living space with positioning and balancing expanses of glazing to the area at high level with overhanging sections to lower levels. This ensured that maximum light was afforded along with controlling solar gains, the addition of a contemporary multi fuel stove within the 'snug' section, with careful positioning of thermostats, allowed the control of heating system with primary and secondary demands. The large vaulted nature of the structure at this point with the MVHR ensured that all heat was carefully re-distributed and controlled.

The master bedroom located directly off the 'hub' area benefits from a feature vaulted ceiling and direct access to the garden terrace. To ensure the energy use of the dwelling was reduced to a minimum, and for the future, the dwelling was over insulated by 25%.

The overall sustainability and lifetime worth of all elements were fittingly considered through the design process, the benefit of each material was scored to ensure the benefits outweighed any negative in relation to a number of factors, such as embodied energy, production values and transport with the overall aim to construct and finish the property with long term durable materials. The property was designed and post tested with an airtightness level of four which was pre-consulted to reach optimum performance, as well as suit the client's living style. This was formed with high performance variable vapour barriers and specific taping with challenging junctions designed out to simplify site taping.

The addition of a PV solar array to the southerly facing roof designed to supplement main demand and large rooflights and expanses of specifically positioned glazing to sheltered areas, means that the demand on artificial lighting is significantly reduced. ■

Judges' comments

This new dwelling is an excellently laid out scheme with exact brief design and the aspiration of lifetime home standards — it is flexible enough for anyone to use it. There is a fine attention to detail and thoroughly thought through to address the user's needs now and in the future. Within the design, the maximum use of solar gain has been utilised without overheating. This is a showcase for demonstrating how technology has supported the design, making it an outstanding winner for the Alan King Award.

Highly
Commended
2019

THE ALAN KING AWARD FOR EXCELLENCE
IN ARCHITECTURAL TECHNOLOGY

Waterside, Ely

Words by Chris Senior MCIAT, PiP

Waterside in Ely, Cambridgeshire, is a radical transformation of three neglected agricultural barns into luxury four bedroom detached riverside dwellings designed by PiP Architecture. In completing this project, PiP Architecture overcame a number of major challenges.

These included ensuring the conversions were suitable for family living while retaining their historic fabric and character; giving each one a unique character while maintaining an overall coherence; making the most of the stunning location and ensuring that they benefit the wider community within their setting whilst maintaining privacy for those living in the homes.

Situated on the waterfront, just five minutes walk from Ely train station, the barns had once formed part of Lavender Farm, dating back to the late 1800s when they were predominantly used for housing livestock.





The first challenge was identifying how to retain the historic fabric and character of the barns whilst making them suitable for modern family life. PiP's radical solution; to remove the roof of each barn and 'drop' a new building inside the original. This meant the new buildings could be two storey in height, taking advantage of the stunning riverside views on offer and maximising the living space available for a comfortable family home.

As the retained 19th Century barns were on shallow foundations, PiP proposed localised pad foundations and underpinning to minimise movement and disruption to the historic fabric. A steel frame bears the weight of the new buildings, directing load through to the ground. The structure is infilled with a stick-built timber frame which allowed quick and easy erection of the main structure. This approach also ensured that construction reached a weather tight point more quickly than a traditional method of construction.

In order to satisfy the requirements of the local planning authority, PiP endeavoured to make each dwelling unique while retaining a coherence to the development. This was achieved by using a carefully selected palette of contrasting, yet sympathetic, materials across all the buildings. However, to minimise unnecessary complexity during the build, a coherent frame construction was employed across all units, with the external cladding finishes providing the variation in appearance. Within the development, some of the barns were rebuilt while others were retained. PiP adopted coherent build techniques which could be used flexibly across both of these scenarios. Given the prestigious central location of the barns, the PiP team ensured that each dwelling benefited fully from the beautiful views of Ely Cathedral, Lavender Green and the River Cam. This was achieved by turning the accommodation upside down. All living areas are located on the first floor within vaulted ceilings and enjoy south facing, solar shaded, roof terraces. Bedroom accommodation is located on the ground floor, with ancillary rooms and studies located to the northern aspects.



In order to satisfy the requirements of the local planning authority, PiP endeavoured to make each dwelling unique while retaining a coherence to the development

With floorspace within the dwellings restricted by the footprint of the original barns, PiP minimised unnecessary circulation space in order to optimise living areas for the pleasure of occupants. All internal walls are non load-bearing, allowing adaptability to the lifestyle and needs of future residents. The wide and open lobby design ensures easy installation of platform lifts, allowing these to become lifetime homes. Fluent disabled access is provided throughout the ground floors and flexible disabled provision is maintained to upper floors.

Each building at Waterside showcases a contrasting material, chosen to complement one another in their rich and natural palate. The materials chosen for each plot relate directly to its context. Plot 1 takes its cue from the colour tones of the stone walling of the barn it is constructed within, Plot 2 is surrounded by trees and clad in timber, whilst Plot 3 fronts the river and features a design to reflect a boathouse. All materials used are low maintenance and sustainable to ensure longevity. Innovative techniques have been utilised to safeguard any vulnerabilities, such as the gaps between the white American oak cladding which are protected against UV deterioration through collaboration with RubberGard.

Throughout the development, simple innovative detailing is central in delivering the high quality finish to the design. Working closely with VM Zinc, sinewave profile rainscreen wall cladding has been utilised on one of the roofs. This pioneering usage has subsequently been used more widely across the country. In addition, the curved zinc eaves and ridge details have been manufactured crucially in single lengths, sourced through a fabrication company in the north of England.

PiP believe in a responsibility to design and build low energy buildings; creating spaces that focus closely on maintaining occupant comfort through minimal means and considering sustainable design from the onset, often with subtle solutions which are integrated into the architecture itself. These principals are intrinsic to Waterside. All units have achieved a SAP energy efficiency rating of A. Window positions and building canopies ensure maximum solar gain during the winter months and effective solar shading during summer months.

The external materials used are all low maintenance and boast a proven longevity. The simplified frame construction ensured that the build costs were kept low without compromising the superior finish of this prominent development.

PiP's radical development at Waterside, Ely secured the confidence of the local authority who gave their full support under delegated powers. PiP have formed a striking contemporary design which enhances the public experience of the riverside enjoyed by the many visitors to Ely, while simultaneously maintaining respect for the traditional proportions and materials of these beautiful historic barns and the sensitivity of the local conservation area and listed buildings. ■

Judges' comments

Waterside is full of clever detailing which was considered at the early stages of the project and anticipated holistically throughout the design. An outstanding design solution approach with use of a superb palette of low maintenance and sustainable materials. Interesting technical solutions have been utilised with the host structures and are energy efficient with a fabric first approach. The whole project has breathed new life into old and disused buildings whilst retaining their historic element.



Commended
2019

THE ALAN KING AWARD FOR EXCELLENCE
IN ARCHITECTURAL TECHNOLOGY

New Holiday Let Unit at Rink Hill

Words by Stuart Davidson Architecture

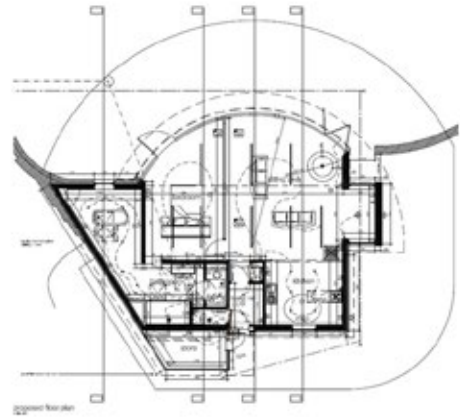
The client's brief was to create a high spec, low impact and 'honest' property catering for luxury short breaks. This was achieved by the building being formed with a continual curved glazed frontage pinned either side by two curving natural drystone walls from the ground to join the building, the wall matching surrounding field walls.

The site is located in open farmland to the north west of the River Tweed on the outer curve of a hillside topped with the site of an ancient roman fort and anterior route linking the fort running to the east of the site. The rural location of the site meant that the local Planning Supplementary Planning Guidance (SPG) had to be reversed to allow development. The design had to work closely with a visual impact study leaving the public viewpoints of an untouched hillside. The existing bank to the front was remodelled to aid this and additional drystone walling formed to hide parked cars from view. The low-profile roof falling gently to the rear ensured there was no high level impact from the property.

A main focus of the build was to utilise natural products in the finishing material pallet, selected to include 70% sourced within a ten-mile radius of the site. The main frontages were formed with natural whinstone, recycled from former drystone walling nearby. All finishing was completed with Douglas Fir timber which was sustainably harvested from a woodland on the client's land, milled and seasoned on site before use.

Due to the remoteness of the site, restricting manoeuvrability and the significant design reductions in material sourcing, the property was designed as an oversized single skin timber frame kit with specific steelwork. The kit was over insulated and overlined either side to ensure optimum airtightness with varying finishing materials externally and service void internally to ensure the airtight layer was maintained throughout. The roof structure is formed from a lightweight twin skin insulated sheet giving a design feature internally of metal sheeting supported on Parallam beams and importantly removing cold bridging at junctions with simple detailing.

The main glazed frontage was formed with both energy performance and solar control in mind, countering the glazed expanse with solar shading to allow for the building to be naturally ventilated, with the concrete floor accommodating as a heat store. The main accommodation ensures ease of movement and enjoyment of the space with all main areas afforded with a view to the frontage. The build is complimented by a solar array to the rear, set into a step again focusing on low impact. The property has been designed, though it is remote, to be fully inclusive and accessible. The large open areas allow for flexible accommodation and free flowing movement and all external spaces are DDA compliant allowing all forms of mobility to utilise the property. As the property is designed for couples, the layout is mainly open plan with a main living area with internal glazed screen to the bedroom, ensuring all rooms benefit from the full 270 degree views. The main bathroom opens to bedroom space though carefully divided retaining privacy.



The property is designed to only have a 50% demand on grid energy against that of a comparable building, this is achieved by the overall reduction due to the design performance of the structure and supplemented by PV panel array set into the bank behind the building. ■

Judges' comments

The new holiday lets have been carefully thought through in their design by the Chartered Architectural Technologist. Though simple in its form, the lets are effective utilising maximum views from their positioning. The clever use of locally sourced materials, combined with the design, assist in blending the buildings within the landscape and create the illusion of a concealed structure.



The build is complimented by a solar array to the rear, set into a step again focusing on low impact



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Futurebuild 2020 will elevate innovation beyond a concept, to showcase how the most forward-thinking brands can make a real difference to the future of the industry and enable Architectural Technology professionals to inspire a more sustainable built environment.

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Innovation front and centre

Innovation runs through the veins of Futurebuild and will be brought to life across the exhibition through innovation showcases, the return of the industry's largest call for innovation – the Big Innovation Pitch – and an Innovation Trail, highlighting exhibitors that are determined to make a difference.

A total of 20 Innovation Partners will form Futurebuild's Innovation Trail, each bringing its latest developments and ideas to the event, including innovations from leading window and door specialist, Internorm and new product progress from raw material experts, Steico. The trail will enable visitors to easily navigate through the exhibition to these key touch-points to experience innovation first-hand.

The Big Innovation Pitch will provide a unique opportunity to identify and spotlight new showcase solutions that can solve the industry's biggest challenges. Consisting of a series of showcases and pitches across Futurebuild's keynote stages, the competition will give audiences a unique opportunity to see hundreds of novel and innovative approaches to the big issues we all face. The BIP will launch soon with a call for entries from SMEs operating in the UK and international sustainable built environment markets.

Responding to the emergency – making the transition to a zero carbon world

The conference in the main arena of Futurebuild will respond to the climate and ecological crisis, and discuss and debate the way forward to Zero Carbon UK. The conference will include a session which has been developed in partnership with the Chartered Institute of Architectural Technologists. It will bring the Presidents of various institutes together to discuss how those working in the built and natural environment are currently tackling the climate and ecological emergency, and ongoing plans for the future.

This commitment to driving change through learning will continue across the event with a series of challenges set across the six sector-specific keynote stages. These platforms are dedicated to sharing the latest thinking and research, providing visitors with opportunities to collaborate and engage with some of the brightest minds in the industry.



These challenges will explore the key topics affecting the industry including buildings, critical infrastructure, energy, interiors, offsite and resourceful materials. The Buildings section will call for ways we can achieve better retrofit, re-use old buildings and create new buildings that are net positive and built to perform.

Areas of excellence

Futurebuild 2020 will focus on depth of quality, delivering a richer experience than any other event in the sector. Taking on feedback from previous events to improve and evolve the visitor experience in each of its six sections, (Building, Critical Infrastructure, Interiors, Resourceful Materials, Offsite and Energy) attendees to the event will be able to maximise their time and attend as much of the world-class education programme as they wish.

A hugely popular area in 2019 for Architectural Technology professionals, the Buildings area at Futurebuild 2020 will cover everything from retrofit to re-use, to making buildings net positive and built to perform. Visitors will be able to explore and discuss the latest building technology, innovations and legislation.

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

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

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

Winner
2019

STUDENT AWARD FOR EXCELLENCE IN
ARCHITECTURAL TECHNOLOGY (PROJECT)

Architectural Technology Studio 3



Words by Albert Greenhalgh, Sheffield Hallam University

The project has been undertaken as the second phase of an existing phased development proposal by EXTREME, a global lifestyle brand and founder of the Extreme Sports Channel.

The proposal is set to bring back to life the site of the previous Sheffield Ski Village located at Parkwood Springs, which was burnt down in 2012 and has since suffered multiple arson attacks.

The brief for the project was to design an extreme sports facility with the main attraction being a 25m high ice climbing wall. Other key spaces included an internal and external sports activity, an event space which had to be situated above the ice wall, a plant room large enough to accommodate the ice climbing wall as well as the rest of the building and a helter skelter which had to be accessed from the top most level. Site constraints set out in the brief were that the existing ski slopes could not be constructed on and that the proposed building could not conflict with anything constructed in phase one of the development.

Since the site has been in a disused state for several years the flora and fauna has overgrown and now holds a prominent presence. A flat exposed shelf cuts into the landscape at the base of the ski slopes which faces directly south subjecting it to a lot of solar gains and means that the site itself can be easily viewed from many different locations across the city of Sheffield. Taking into account the key aspects of the site and project brief, the main drivers of the project were:

- The ice climbing wall being the main attraction of the facility and thus being situated centrally in the design where other visitors could have a view of the wall as they travelled through the building.
- The visual impact of the building up close for those visiting the site and far away due to the exposure of the site for onlookers from varying locations around the city.
- The view out of the Sheffield skyline from every level of the building, not just at the top where the event space is located.
- The sustainability of the design in managing the high energy demands of maintaining a frozen atmosphere and what the immediate and extended environmental impact would be to site. Passivhaus standards are incorporated into the design to help minimise the cost of heating and cooling the building.

The concrete core encapsulates the ice climbing wall and, in the process, efficiently segregates the frozen atmosphere from the other internal spaces



In taking a sustainable approach to the design and to also satisfy the project drivers, the success of the building came down to the primary structure which originally started as monolithic concrete frame, however, through material development and different approaches to make the building efficient, spacious and have a strong visual impact it resulted in a repeating glulam frame construction with an in-situ concrete core.

The concrete core encapsulates the ice climbing wall and, in the process, efficiently segregates the frozen atmosphere from the other internal spaces in the building where the glulam frame acts as a shell. The concrete core has windows on the outer wall where visitors can observe any ice climbing. Glulam is known for being able to span large distances and so was a suitable choice for the 11m spans which were needed to create the large, open spaces in the building for the internal and external activities in order to provide a design which visually connected the spaces to one another, especially when voids occurred in multiple floor plates to really open up the whole building. The decision to have a glulam frame was also to create more aesthetically pleasing internal spaces as opposed to other structural materials when left exposed.

The aesthetic of the glulam frame is a repeating triangular pattern which creates a strong visual impact up close and from afar. The frame supports a curtain wall system manufactured by RAICO, which achieves passivhaus thermal standards.

This helps maintain the internal thermal environment as well as provide the views out of the Sheffield skyline at every level of the building. However, with it being an exposed site, direct solar gains will be an issue for the building. The proposal is to incorporate a dynamic façade which responds to the position of the sun and the internal temperature of the building throughout the day, at which point if it becomes too hot the façade will provide solar shading to reduce the amount of solar gains. This dynamic façade will also add to the visual impact of the building as it will impose a 'live' appearance which will be more interesting than static solar shading.

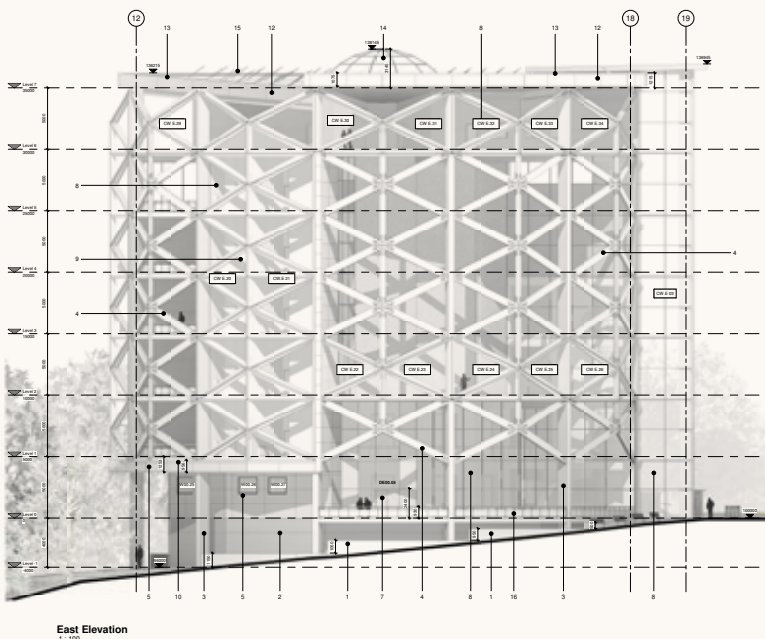
The building will be serviced through mechanical ventilation with heat recovery (MVHR) to ensure that passivhaus standards are met. The service ducts take advantage of the central circulation space which has a set of helical stairs that connects to every level. The MVHR works in tandem with the services for the ice climbing wall to ensure that heat and energy are being recycled as much as possible in the building. This helps reduce initial energy expenditure, the roof is fitted out with an extensive amount of PV's to capitalise on the exposure of the south facing site.

To help encourage the flora and fauna of the site an intensive green roof is used to imitate the conditions of the site. This approach will extend the varying viewing terraces and balconies at different levels of the building. The green roof will also help manage excess storm water and reduce the stress on the drainage system. It also assists to cool down the PV's by absorbing solar gains instead of reflecting and keeping them functioning more efficiently for longer. ■

Judges' comments

The conceptually bold design and its complete technical resolution has been developed holistically which illustrates the nature and breadth of the Architectural Technology discipline. This complex design demonstrates immense creativity and a balance between the architectural design aesthetics and the technical design to create a unique form and structural solution. A sustainable MEP (services) strategy was selected to integrate with the structure and create the necessary comfort conditions in such a multi complex functional environment. The solution clearly demonstrated a deep and broad knowledge of the different and challenging aspects of this design project.

The judges concluded that the key criteria of functionality, inclusivity, sustainability and performance were comprehensively demonstrated, indicating a high level and rounded understanding of Architectural Technology and its place within design and architecture and the role and function of the Architectural Technologist.



East Elevation
1:100

Highly
Commended
2019

STUDENT AWARD FOR EXCELLENCE IN
ARCHITECTURAL TECHNOLOGY (PROJECT)

Maggie's Windermere

Words by Kirsten Adjei-Attah, Coventry University

Maggie's Windermere is a conceptual cancer support centre based in a picturesque location at the heart of the Lake District. A Maggie's Centre is a place that offers 'practical, emotional and social' support to people living with cancer and all friends and family affected by the disease. The charity has a unique approach to providing support to strengthen everyone's physical and mental wellbeing with staff and qualified experts to offer the support people need. It is a place to meet others or simply have a cup of tea.

Maggie's Windermere is a safe haven designed for everyone to feel comfortable and cared for whatever their emotions may be. The design intent is to provide a place that instils magic into their lives. It was important to undertake a design project considering another's extenuating circumstances throughout. A cancer patients' experience can be an exhaustive period of treatments whilst feeling a whirlwind of emotions and a period of severe uncertainty which exacerbates their worries. It was essential to raise awareness for patients who may feel alone and families coping with a loved one undergoing treatment or bereavement. The motive behind the location is to provide a facility in an area that lacks health care support to raise more awareness for the need of more cancer care facilities particularly in the northern regions of the UK where there are minimal facilities.

The concept was heavily influenced on therapeutic elements for cancer patients such as exposure to nature. The concept was for all visitors and staff to experience a light space with beautiful garden views from all points of the building. Having a connection with nature was a core aspect to this project, gardening, moving water and views of nature gives people peace of mind which aids the healing process which cannot be experienced in a clinical and uninspiring hospital. I thought that a building with three interconnected spaces in a stepped layout would be the most effective proposal in defining spaces for communal and private use with easy access to services e.g. accessible WCs.

The concept was heavily influenced on therapeutic elements for cancer patients such as exposure to nature



An important aspect was to not ignore the traumatic reality of what a cancer patient is going through in the spatial arrangement. Providing dedicated a zone in the building where they can reflect or receive physical and mental care was essential with a separate access point provided if needed.

Tulipwood cross laminated timber was showcased for construction due to its thermal, fire, acoustic and environmental properties which are essential for creating a comfortable and healthy environment for people living with cancer. The building materials incorporated have been selected in mind of the physical side effects of treatment a patient experiences, such as specifying timber handrails and having an exposed thermo-treated Tulipwood CLT interior to accommodate a patient's sensitivity to touch and using robust and non-toxic materials.





The structural double layer visible CLT wall panels were detailed to contain significantly thick insulation in comparison to the usual brickwork-cavity-blockwork construction, sufficient for domestic projects. Woodfibre insulation was specified to encourage a healthier indoor environment, it uses healthy 'breathable' fibres in comparison to standard insulation which contain toxins. The use of prefabricated modular elements such as the lattice trusses and wall panels means the presence of cement dust will be significantly reduced and minimises the risk of dust having an adverse effect on the health of construction workers, local wildlife and people crossing the site. This practice encourages a healthier and faster assembling process.

Architectural Technology looks into solving technical problems to enhance the efficiency of the building design. Simplicity was essential for both design and detailing. Tulipwood cross laminated timber was important in communicating a light, airy and warm space. Externally, the Tulipwood CLT ribbed façade strategy was determined through the spatial arrangement by identifying areas that would require privacy, quietness and reflection, such as the sleep therapy room. The identified rooms were clad with vertical timber with box windows to enable deep natural light to enter yet retain privacy for the users simultaneously. The portal frame system is composed from a series of lightweight modular timber lattices in which the design was developed and integrated from my dissertation laboratory research.



Timber was used to offer a lightweight, rigid yet sustainable structural solution. The lattices were incorporated to reflect strength and light atmosphere for the users of the building. Inclusive design was incredibly crucial for Maggie's Windermere with the entire scheme designed in accordance with DDA regulations, BS 8300 and Part M Building Regulations. Three access routes have been provided (two stairs and one ramp) to ensure users of the building will enter and leave safely with a predominantly open plan floor plan. The building zones have been specifically designed to have their own distinct environments specifying different 'non-slip' floor textures such as distressed timber, slate and resin flooring. This eases way finding for the users with visual impairment and physical disabilities enable them to identify their location in the building which can be detected on foot or when manoeuvring around on a wheelchair along with staff support.

Overall, the design and detailing of Maggie's Windermere is simple and sustainable to create a healthy environment, with the integration of architectural technology used to inspire and bring comfort to those in need. ■

Judges' comments

The warm and sensitive design response and sympathetic technical resolution has produced a building of great merit. The design solution demonstrates a deep empathy and understanding of the brief, exemplifying the social impact of Architectural Technology. The overall design creates an environment with comforting qualities that addresses the physical and mental well-being ambitions with apparent simplicity. The judges concluded that the key criteria across the spectrum of planning, design, environment, construction and assembly, performance and use was clearly evidenced within this design project and the thread of Architectural Technology was a strong theme throughout this work.

Commended
2019

AWARD FOR EXCELLENCE IN
ARCHITECTURAL TECHNOLOGY

Thorpe Lakes: Museum & Visitor Centre

Words by Aaron Edge-Stenson, Nottingham Trent University

Thorpe Lakes Museum and Visitor Centre is a proposal for a state-of-the-art sustainable facility, situated within the heart of Lincolnshire sub-regional country park. The 6500m² development seeks to educate users about the natural environment through extensive exhibition and museum space, and moreover provide a natural home for the activities of the Lincolnshire Wildlife Trust.

The rolling roofscape of the building echoes the natural undulation of the surrounding landscape and serves to conceal the building, allowing a seamless fusion between the architecture and the natural environment. The carefully sculpted walkways which lead to the building, symbolically and physically connect the building to the wider site, which also features; bird hides, picnic areas and a playpark. The interior journey continues under the curvaceous timber gridshell roof. The building embodies a sense of drama and intrigue through the combination of the undulating architectural form and the strategically placed glazing which provides glimpses of the outstanding natural world outside. Views through the fully glazed section of the main elevation provide a constant sense of visual communication between the internal environment and the enchanting scenery of the wider park.

The scheme adopts passivhaus design principles, promoting natural daylighting and limiting the dangers of overheating. Strategically located north-facing glazing has been used to harness daylight whilst limiting excessive overheating. The building was orientated to allow less intense sunlight to penetrate the main glazed façade after 15:00 [study based on summer solstice], when sunlight is typically less intense. The undulating green roof overhangs the external walls by as much as 1m in places, this helps to provide natural shading in critical locations. The orientation has also been optimised to maximise natural ventilation opportunities, in addition the design features narrow floor plates to facilitate cross ventilation, reducing the aggregate HVAC energy load.



The Thorpe Lakes site was formally used as a gravel pit, which is indicative of a loose sub-soil with poor bearing capacity within the superficial deposits. A more in-depth study revealed that there was suitable bedrock to facilitate pile foundations below these superficial deposits. The piles would be topped with pile caps and then linked together using ground beams, stabilising the pile caps in the event of any differential ground movement. A primary steel frame will form the skeletal framework for the building. This framing system provides high strength yet a relatively low weight structure, whilst also allowing for offsite fabrication and rapid onsite assembly.

Precast concrete hollowcore planks will be used to form the suspended ground floor system as the ground conditions dictated that a ground bearing slab would be unachievable. A Secondary Framing System (SFS) will be used to form the external walls, these partitions will span between the primary steel frame members. A robust weather board will be secured to this framework, this will allow the perimeter walls to be weathertight earlier in the construction programme and take the cladding works off the critical path.

The undulating green roof will be formed from a gridshell roof structure. Gridshell structures are not a high-tech approach, but such structures do perhaps herald the trend to use more ecologically sensitive materials within construction. These structures represent a return to more traditional construction materials yet integrate new ideas about how these materials could be formed and shaped. Taking inspiration from the Savill Building in Windsor Gardens and the Weald & Downland Open Air Museum in Chichester, the roofscape was sculpted to simulate the natural undulation of the lakeside landscape. A structural skin of birch plywood can then be fixed over the grid, covering the whole roof. Insulation can then be applied to this skin, thus providing a substrate to apply the single ply membrane water-proofing system to. Finally, a proprietary green roof system can then be applied as the final layer, result in the following roof build-up; gridshell structure, birch plywood, vapour control layer, insulation, single-ply membrane, drainage board with integrated filter fleece, extensive sedum substrate and finally green roof planting.

The roof design features a curved shell formed from 50mm wide x 35mm thick larch laths in four layers. The upper and lower laths are formed from a continuous lath with two layers of 'shear blocks' fixed at 500mm centres between the upper and lower laths, this forms 'ribs' or 'voids' through the members. These voids allow a member to sit within a corresponding transverse member, forming an interlocking node at grid intersections. At almost 100m long and 16m across at its widest points the roof will be one of the UK's largest timber gridshells. The internal height varies between 7m and 10m from first floor FFL. The lath spacing varies between 600mm in areas of high load, increasing to 1,200mm over large areas of the shell. Diagonal bracing of longitudinal and transverse timber rib-laths, fixed to the nodes once the shell is formed, provide shear resistance and lock-in the shape. The bracing also supports the wall and roof cladding.

The nodal connector consists of four plates, the centre plates having pins to locate the grid geometry of the middle lath-layers and the outer plates loosely hold the outer laths in place, allowing sliding during the formation of the shell. Two of the four bolts locating the plates are used to connect the diagonal bracing bolted in place to provide shear stiffness after forming the shell. This is a similar system to that which was adopted by Edward Cullinan's Weald & Downland Open Air Museum. The building represents a seamless fusion between traditional and modern construction methods.

The extensive use of timber gridshell technology is a reinterpretation of traditional materials and methods. Using this technology allows the building to adopt an organic form, which allows the building to blend in with this ecologically sensitive site. ■

The building represents a seamless fusion between traditional and modern construction methods



Judges' comments

The complexity of the building geometry has been addressed by the technically comprehensive and well-developed building envelope and its structure and fabric. The materials palette is successful in connecting, linking and integrating the building within its context of the surrounding natural environment. The communication and overall presentation compliment the high standards of technical design and detail and mode of construction and sustainability. Every detail is considered down to the level of the reed bed tertiary waste treatment proposal, reflecting and extensive knowledge and command of the natural design agenda. The judges concluded that this complex design met the key criteria with a strong and sympathetic inclusive and environmental design solution that highlighted the place of Architectural Technology in such challenging projects.



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 STUDENT AWARD FOR EXCELLENCE IN
ARCHITECTURAL TECHNOLOGY (REPORT)

Timber Lattice Columns

Testing the Compressive Strength for Low Rise Construction

Words by Kirsten Adjei-Attah, Coventry University

Timber is now acknowledged as a material used to build ‘healthier hospitals’ (TRADA 2017) due to its environmental benefits and therapeutic qualities.

Three full-scale column prototypes consisting of diamond, triangular and circular lattice infills were fabricated and tested to determine whether the geometrical arrangement of the internal lattice structure affected the compressive strength of the column. The purpose of this research was to undertake research into lightweight structural timber elements with varied lattice infills for low rise construction, particularly for hospices and palliative care facilities where uplifting spaces are essential for therapy, treatment and end of life care. The columns created are part of a modular construction system for the portal frame that would be exposed in the kitchen/dining area and the staffroom to chapel in Maggie’s Windermere (see page 26). The study was highly important to assess whether the columns could to satisfy the structural requirements needed to support the CLT roof system. Results found that all columns performed well beyond the minimum structural requirements to support a roof load of kN/m² which means each column can be considered safe for use in construction. Findings concluded the porosity volume (cellular voids) had a significant impact

on the compressive performance the lattice column with the circular lattice proving to be the highest performing column failing at 31.46kN (3.16 tonnes), due to increased surface area of material. Nevertheless, the diamond lattice infill column was an efficient lightweight alternative.

Due to the bespoke nature of timber lattice structures, there are limited research publications associated with cellular loadbearing elements in construction. Maggie’s Manchester designed by Foster + Partners is a pioneering case study for the implementation of Laminated Veneer Lumber (LVL) timber lattice beams used as a modular component to form the lightweight portal frame structure. The design heavily and encouraged my curiosity to research into whether other shapes.

Compression tests commenced on all three columns until each column reached complete failure with the minimum roof load threshold of 2 kN/m² considered. Each timber lattice column was positioned horizontally on a large ‘I’ beam testing rig apparatus. The wide cantilevered tip of the column was secured into the loading jack connected to the hydraulically controlled loading cell which applied compressive load. The loading cell controlled the rate of load with two linear displacement transducers used to measure displacement. The transducers were positioned underneath the column to measure the flexural bending behaviour of the column as compressive load was applied whilst a transducer located on the loading cell assessed how each column performed under stress observing for evidence of delamination and deflection in the columns.



The transducers provided graphical information on the flexural behaviour and compressive performance of each column. The typical behaviour of all columns was to gradually deflect in response to compressive load. The lattice columns were unexpectedly flexible as they showed signs of torsional strength where the column started to twist before rupturing into complete failure. However, the test exposed the performance materials when undertaking material analyses, the modes of failure were determined by delamination as the buckling force led to the wood veneer to splitting which then transpired to the adhesive failing and causing the layers to separate which led to material failure of the WBP plywood. All prototypes were fabricated using three standard-sized sheets of water boil proof plywood dimensioned at 1220mm x 2440mm, the columns were designed to fit on standard 'off-the-shelf' sheets supplied by manufacturers in the UK. Using off the shelf products meant that the make of the columns did not require any bespoke manufacture. The selection of water boil proof plywood, an economical timber composite was selected due to its cross laminated properties. However, the key focus of the test was to assess the correlation between the lattice geometry and compressive strength as opposed to examining the quality of material. Plywood would not be appropriate for palliative care facilities.

The project embraced CAD programmes and construction technologies throughout to aid the fabrication process. The lattice column profiles were drafted as a two-dimensional drawing using AutoCAD software during the preliminary stage to aid the laser cutting manufacturing process of the 1:1 (full-scale) prototypes components before transitioning onto three-dimensional modelling software, Sketch-Up, to gain an understanding of the volume of the column which forms the portal frame system. The use of CAD was an instrumental factor towards the preparation for the fabrication process.

This practice was about maximising the use of CAD to design prefabricated elements accurately to allow a faster and more efficient building construction process.

Each lattice column consisted of three components that were adhesively bonded together.

Using a mechatronic laser, the specialist system read the two-dimensional AutoCAD drawing generated to cut the column profiles rapidly and precisely to the desired dimensions. If the fabricated components were created manually, fabrication time would have been compromised with the inevitable inconsistencies exposed in the detailed geometrically-arranged lattice cores which would have affected the validity of the test. Utilising CAD programmes is the optimal design method to achieve prototypes to the precise measurements desired with using CNC machinery, recommended to achieve a professional finish instead of laser technology to avoid charring to the finished product.

The idea behind developing a truss design with cellular voids derived from the design concept of bringing strength and lightness to uplift the centre users with interest in revamping familiar traditional construction methods/systems with unique, lighter and more efficient structural elements. Architectural Technology was demonstrated in investigating and understanding the behaviour of materials during testing and technologies in order to integrate the trusses safely into the design. Simple shapes needed a simple solutions in order to solve a design challenge. The trusses were used in conjunction with detailing to create the spaces that complied to regulations. ■

Judges' comments

The project embraced inclusive design and building performance for end users and the functional design solutions to create prototypes that were manufactured, assembled and tested. In particular, the laboratory testing of the timber lattice columns was conducted to determine the optimum share of the lattice infills. An extremely innovative study embracing the spectrum of Architectural Technology with a particular emphasis on the importance of structural elements not only as the primary function but optimisation including use.



**The project
embraced
CAD
programmes**





STUDENT AWARD FOR EXCELLENCE IN
ARCHITECTURAL TECHNOLOGY (REPORT)

Verifying the Positioning of Passive Fire Protection in the Ventilated Rainscreen Building Wall Envelopes

Words by Michael Daly, Ulster University

Addressing the well-publicised build quality issues within the built environment sector is arguably the greatest challenge facing the sector at present. Issues can arise from a lack of on-site inspection leading to inadequate workmanship detailing along with substitution of materials from those originally specified at the technical design stage.

Whilst such deviances from original technical design intent can have negative consequences, in relation to building performance, such as a reduction in thermal and acoustic properties, this pails into insignificance compared to potential life safety issues.

One of the most obvious threats to life safety within a building is fire, and the identified areas of workmanship, detailing and inspection are critically important in ensuring sound details are constructed, none more so than in ventilated facades. Ventilating facade systems have become popular over recent years due to the range of colours, styles and profiles which allow most aesthetical intentions to be realised. This, coupled with the general robust performance and ease of construction, means they are a popular choice for contemporary buildings and in retrofitting projects. However, with ventilated facades, like with any envelope, there is the potential for passive fire protection issues, with the performance in a fire dependent on the workmanship detailing, especially with regards to cavity barriers, and the materials used during the construction. This becomes critical in light of the reported issues relating to fire safety inspection (Littlewood et al. 2017).

The Report focused on verifying the positioning of cavity barriers in ventilated facades. The research triangulates the stated issues relating to quality via a focus group discussion with industry professionals,

with a focus on fire safety, before the potential for a technological solution presented in the form of a clash detection analysis using captured point cloud data of in-progress construction work linked to a project building information model.

The claim of inadequacies relating to manual visual inspection of passive fire protection for life safety has been corroborated by the review of literature and the findings of the focus group. This study suggests that the current means of visual inspection, whether it be from a regulatory body or third-party accreditor, is not adequate for ensuring the in-built performance of fire safety measures. Therefore, there is a need for increased supervision on construction sites or other means which can verify the veracity on constructed details. Such failings have serious implications, as, in the event of a fire, missing, damaged or use of the incorrect type of cavity barrier, not flagged by inspectors, can undermine the passive fire strategy leading to the spread of smoke and flame outside of the designed compartment. It is important that adequate regulation is followed by robust inspection processes to ensure on-site compliance and protect building occupants. Littlewood et al. (2017) called for non-intrusive and non-destructive test methods for assessing passive fire protection. A testing method as identified in this study could seamlessly align with and contribute to the BIM process for the purposes



It is important that adequate regulation is followed by robust inspection processes



of validating and verifying Asset Information Models for facilities management purposes. Whilst inspection to verify correct placement of cavity barriers alone will not act as a panacea, it is a key component in the overall strategy. The ‘threat’ alone of using such technological processes may also be sufficient to discourage the practice of altering or changing details on site as reported in O’Kane et al. (2018). With the fast-paced technological advancements evident in the construction sector it could be an ideal time to promote and utilise digital technologies and processes to help improve construction quality.

Construction failings could in part be due to procurement practices which place less of an emphasis on quality, certainly in comparison to time and cost (Bowen et al. 2002 citing Bennett and Grice, 1990). This is evident from the focus group findings presented in this study which highlighted the possibility of contractors reducing construction costs without giving holistic consideration to key construction details potentially impacting on life safety. Broadly it could be an indication that the construction sector fails to recognise itself as a service industry delivering products to end users.

Whilst the potential for using a remote sensing technology to verify the position of cavity barriers in a project BIM has been identified, this is only one part of the equation as the verification procedure against a project BIM is reliant upon the model being developed to a level of detail in which components such as fire barriers are modelled. Presently the level of model development varies greatly in projects.

The findings suggest there is a need for onsite verification of critical details from a life safety perspective, with technological approaches potentially playing a significant part in future implementation. It is evident that there is a lack of communication between designers, contractors and inspectors.

Whilst technological intervention won’t necessarily fix the communication void, the use of remote sensing technologies linked to a project BIM has shown potential in verifying positioning of critical components. The findings from the focus group would suggest that real change requires legislation to enforce a new regulatory system which embraces digital approaches and aligns with the BIM Level 2 process in order to ensure important life safety aspects of buildings and other performance related details are constructed as per designers’ intentions. ■

Judges’ comments

This study referenced many of the issues within the industry and in particular the quality and standard of construction installations. It also recognised the difficulties of compliance and the resources required to physically check each component and element but proposed the potential for technological solutions in the form of clash detection analyses.

The conclusions suggested that technological interventions may assist inspection and provide more robust verification for fire safety but acknowledged there is not a silver bullet that can be used for all tests that would be able to provide better quality assurance for improving life safety. This is a useful study that further exposes the problems faced within Architectural Technology practice post Grenfell and the Edinburgh Schools enquiry to achieve total building enclosure performance to improve life safety.

Commended
2019

 STUDENT AWARD FOR EXCELLENCE IN
ARCHITECTURAL TECHNOLOGY (REPORT)

Wayfinding Design

An Investigation into Wayfinding Design Techniques Employed in Healthcare Facilities in Northern Ireland and the Need for Wayfinding Standards

Words by Catriona Slane, Ulster University

Wayfinding is the process of determining location and orientation and then planning and following a route to the desired destination. As one of the first to discuss wayfinding, Passini (1980) describes it as a problem-solving method which allows dynamic navigation to a chosen location.

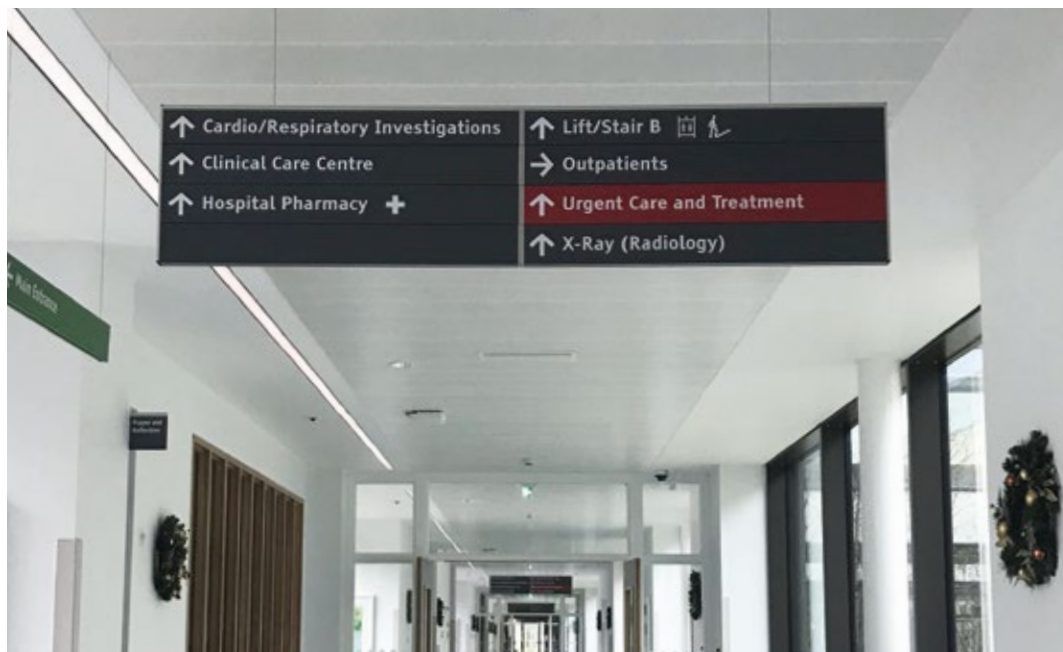
Wayfinding is supported through various different methods such as lighting, architectural indicators, directional and informational signage or you are here (YAH) maps. Good wayfinding systems should provide strong definitive signals enabling the user to ascertain their location and navigate towards their destination across individual decision points. Poor wayfinding arises when the user cannot make an informed decision as a result of flawed wayfinding cues. This leads to user frustration and failure of the wayfinding system leaving some unable to locate their destination.

While successful wayfinding design can diminish stress, an inadequate system can escalate an individual's levels of anxiety while simultaneously creating further costs for the hospital. These costs are generated by missed appointments, deferred meetings or irrecoverable time among members of staff, which is spent conveying directions to patients instead of completing their own tasks. If poor wayfinding ensues, it can adversely effect on the encounter of an institution as a whole. It has been suggested that wayfinding in the built environment is often hindered as a result of elaborate design, insufficient visibility, and an absence of distinctiveness.

Wayfinding and the employment of appropriate wayfinding techniques can be often overlooked as a key feature of a design and more than often it is not until the operational period of a design begins that poor wayfinding is highlighted by building users. For a healthcare facility to meet its desired purpose and function successfully, internal navigation systems should be efficient and accurate.



Poor wayfinding is highlighted by building users



The NHS Wayfinding, Effective Wayfinding and Signage Systems document (published in 2005) was created to improve wayfinding in healthcare facilities by providing recommendations, highlighting good and bad practices, and approaches to avoid and adopt. The document was developed as a form of guidance for use by facilities and estates management, architects, architectural technologists or sign manufacturers. In Northern Ireland this is the primary form of guidance when it comes to designing and implementing Wayfinding systems in hospitals. Unfortunately, these best practice guidelines are not enforced or assessed, and their incorporation into the design of healthcare facilities remains at the discretion of the wayfinding system's author.

Through a case study methodology this research project evaluates the current wayfinding schemes implemented within healthcare facilities in Northern Ireland and assesses how well they perform. Two local hospital facilities were selected, one being a relatively new complex opened in 2017, and one which has been operational for over 50 years. Observational site surveys and audits were performed using survey tools presented in the NHS guidance document. The 'site survey' tool and 'auditing your site checklist' were both utilised with the expectation that any research accumulated will have been done so according to the best current practice standards.

Applying the 'site survey' tool, routes to multiple destinations within both facilities were appraised and decision points noted. External site aspects were addressed using the 'auditing your site checklist' with the subsequent survey findings forming the foundation for the following case studies. The case studies provided a comprehensive insight to the wayfinding in place at both hospitals, and when analysed against the best current practice guidelines available, numerous problematic issues and inconsistencies were uncovered. Unexplained abbreviations, illegible signage, and conflicting colour coding were just some of the flaws highlighted. Contrary to what was expected at the beginning of this research project, the wayfinding in place at the newer facility was not in any way superior to the older facility.

In fact, the longer operational hospital seemed to have realised the wayfinding failures and implemented temporary and self-made signage to overcome the system's shortfalls. Although the wayfinding systems in place at both hospitals display considerable potential, the discrepancies found raise the issue that only sub-par guidance is available and that without any enforced standard there is much divergence from current best practice methods.

Furthermore, for the creation of a strong wayfinding system to be accomplished proficient pre-planning is required from the beginning. Design schemes should be carefully considered to ensure there is provision for an effective wayfinding system and that these systems can be coherently combined in cases of facility extensions. As architectural technologists, often overseeing projects from inception to completion, this is something that we need to appreciate and a topic which demands more attention. The research concludes by proposing the notion of a standard set framework for Wayfinding. A solution that could be a collaboration by a range of relevant parties; and managed and enforced by a regulatory body such as the Regulation and Quality Improvement Authority (RIQA). Such a standard would allow for more robust wayfinding design in hospital settings and could facilitate the creation of a more in depth and detailed guidance document. ■

Judges' comments

The findings of the study exposed the numerous inconsistencies and shortfalls in hospital environments and highlighted the confusion caused to the various user groups and the stress and wellbeing of the occupants. The report further highlighted the need for a robust standards framework to ensure consistent way finding systems are designed for the benefit of all users in healthcare provision. This is an important study in the field of Architectural Technology as inclusive design is identified as a key area within Architectural Technology education and practice standards.

The AT Awards Finalists

ATJ takes a look at the other Finalists in all the categories

THE CHARTERED ARCHITECTURAL TECHNOLOGIST OF THE YEAR AWARD

*extracts from the testimonials

Simon Lewis-Pierpoint MCIAT

Simon's excellence as a Chartered Architectural Technologist is demonstrated in the quality of the designs he creates and delivers, winning him many accolades. Throughout everything he does, Simon demonstrates a non-compromising will to 'do it right' and find solutions to the challenges of constructing forward-thinking designs.

Karyn Williams MCIAT

Karyn is a powerful inspiration for those entering the profession, consistently focusing on the success and development of others. She provides enthusiasm, encouragement and patience with a clear and positive focus on providing first-class solutions for her colleagues and clients.

THE AWARD FOR EXCELLENCE IN ARCHITECTURAL TECHNOLOGY



Augusta Bay, Llanelli
Powell Dobson Architects

Augusta Bay is a five bed house that forms part of the final phase of the wider exemplar Pentre Nicklaus development in Llanelli. Designed to maximise the uninterrupted views to the South West, key features include the softening of the boundary between internal and external spaces, first floor living and a local stone wall.



Earlham Hall Courtyard
LSI Architects

This project incorporates the restoration, alterations and repairs to the existing former stable block/coach house and potting shed within the curtilage of Earlham Hall at the University of East Anglia, together with a new single storey pavilion.



The Fire Station
Studio Kyson

The architectural interventions achieved on this project were to recognise and breathe new life into its key historic achievements by using open spaces and exposing the ironwork frame to demonstrate the success of the wide spans and resultant natural lighting.

THE ALAN KING AWARD FOR EXCELLENCE IN ARCHITECTURAL TECHNOLOGY

The Church of the Holy and Undivided Trinity, Magheralin
Des Cairns Architecture

The church is in a Gothic Revival, mainly early English style, with a three-stage stone tower. In renovating this conservation project, the goal was not to remove or alter any of the original fabric and included improved access, efficient LED lighting and a new planar glass wall creating a separate space.

Renovation and Alterations to 10 Quay Street, Woodbridge
Plaice Design Company Ltd

The client called for the complete renovation of an existing but neglected two bed property, in order to create a contemporary three bed dwelling. As the property is located within Woodbridge Conservation Area, a careful and sensitive approach was required to ensure the property respected its surroundings.

Treehouse
Studio Kyson

The Treehouse installation was undertaken as a practice-wide research and development project and followed a body of research into an ancient Japanese method of weatherproofing called Shou Sugi Ban. The project looks beyond modern inventions and considers the revival of more rudimentary techniques that proved so effective many years ago.

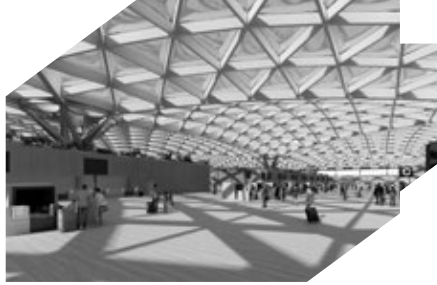
STUDENT AWARD FOR EXCELLENCE IN
ARCHITECTURAL TECHNOLOGY (PROJECT)



The Climbing Centre at the Sheffield Ski Village

Liam Charnock, Sheffield Hallam University

The Sheffield Ski Village is a scheme which incorporates a 25m high ice climbing wall and a host of other facilities including retail and food. The building features a dynamic solar shading system in the atrium developed to regulate internal temperatures.



Heathrow Timber Terminal

Jack Nolan, Coventry University

This project is a proposed sustainable terminal at Heathrow Airport designed to coincide with a third runway. The building utilises sustainable materials, technologies and practises. Biophilic elements such as interior green parapets and plant areas relieve the stresses and anxieties of the travelling experience.



Wales National Aquarium: Cardiff

Isabelle Piorkowska, Coventry University

Wales National Aquarium is a proposal for a new build aquarium and marine research facility in Cardiff. The aquarium is on the lower three storeys of the building to create a sense of entering an underwater world.

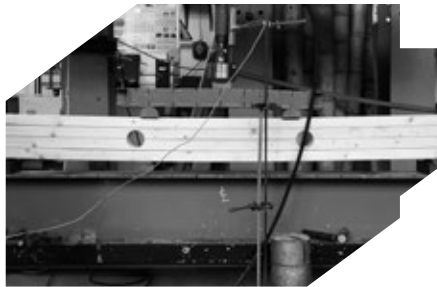
STUDENT AWARD FOR EXCELLENCE IN
ARCHITECTURAL TECHNOLOGY (REPORT)



An Investigation into the Compressive Strength of Concrete as a Result of Being Mixed and Cured with Salt Water vs. Fresh Water as Well as the Effects of Using Recycled Aggregate in the Mix

Isabelle Piorkowska, Coventry University

For this dissertation, the compressive strength of 100mm concrete cubes were tested in four different batches utilising salt/fresh water with differing aggregates. The study demonstrated that concrete mixed and cured with fresh water is stronger in compression than when it is mixed with salt water.



The Performance of Glulam Beams with Service Holes and Different Types of Reinforcements

Jack Nolan, Coventry University

This research investigated the suitability and performance of glulam beams with service holes and the effect of different types of hole reinforcement. It aimed to determine the best solution for service integration with glulam beams for use in commercial buildings and enhance the practicality of structural timber.



Virtual Reality in the Architectural Technology Curriculum

Cameron Wood, Robert Gordon University

This dissertation sought to understand the climate for virtual reality within the Architectural Technology curriculum in the UK. Cameron was able to see what progress was, and is, being made, and calculate to see if the time is now right to be implementing the technology with an appropriate method.

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DCW 2019

The built environment sector continues to undergo transformative digital change and DCW 2019 will showcase this when it returns to London in October and supported by CIAT

We are experiencing one of the biggest periods of change in our sector, discussions about digital processes and technologies have moved from theoretical to real life. The UK Government's £170m Construction Sector Deal and the launch of the £72m Construction Innovation Hub will help take the industry forward and represents a huge opportunity for you to help transform the sector and gain real competitive advantage.

DCW, taking place on 16-17 October at London ExCel, aims to highlight these opportunities. Featuring eleven theatres (ten free-to-attend), 300 expert speakers, over 160 hours of content-rich talks, seminars and workshops, more than 180 industry-leading companies and a full two-day thought leadership conference, DCW is a "must-attend" for those wanting to get a first look at the latest innovations and cutting-edge technology shaping the future of this dynamic sector.

What's on at DCW 2019?

Meet with over 180 industry-leading companies including BAM, Bluebeam, Leica, Skanska, Procore, BIMObject and Autodesk who will be showcasing their latest technologies and providing the opportunity to get hands-on and test out their products. Expect to see robotics, AR, VR, AI and machine learning, laser scanning, drones and UAVs, smart materials, collaborative tools and much more.

The DCW **Seminar Programme** covers everything from BIM, Geospatial and Visualisation to Innovation, Business Transformation and Tech amongst other key themes. Full details of the programme can be found online at digitalconstructionweek.com. In addition to the extensive seminar programme is a series of features and fringe events that are not to be missed.

The Construction Innovation Hub is a brand new and exclusive theatre delivered in partnership with the recently launched Construction Innovation Hub. Visitors will explore how we can change the way buildings and infrastructure are designed, manufactured, integrated and connected within our built environment.

Exhibitors and partners will showcase their technologies 'in the field' on our replica construction site, The Onsite Arena. Visitors can get to grips with the latest technology linking from the office to the field. In between sessions head over to the site office and meet the Bluebeam team who will be running a series of hands on demos with the latest touch screens and Microsoft technologies.

Back by popular demand is the **Drone Drag Racing**, a much-loved spectacle at DCW. The competition is open to anyone who would like to have a go flying a mini drone. Secure a spot at the top of the 'top gear' style leader board to win a trophy at the end of day two. There is also plenty of opportunity to wind down and network during the **DCW drinks reception** held in the Nemetschek lounge at the end of day one. **The Start Up Zone** returns once again and will feature a selection of the latest technologies and concepts with the potential to solve some of the industry's biggest challenges. We'll be working with our event partners to scour universities, R&D departments and tech start-ups to find those ideas with the biggest potential.

Thought Leadership Conference

As well as the range of free content on offer, Digital Construction Week 2019 also boasts a full two day thought leadership conference targeted at senior level decision makers and influencers from across the industry.

With an unrivalled line up of the most innovative experts and thought leaders from across the built environment, the conference programme is designed to help you better understand the opportunities associated with innovation and technology and offer a look into the future of the AECO sector.

For more information or to register to attend, visit digitalconstructionweek.com



Short of time for learning and networking? Here's seven ways to do both at UK Construction Week

We all know we need to get out more. How else will we meet new people, learn new things, find new ideas and discover new products? It can be difficult to justify time out of the office with all those deadlines looming. The smartest solution for busy Architectural Technology professionals is choosing days out that can be crammed with as much value as possible. By taking advantage of UK Construction Week (UKCW), supported by CIAT, you can tick off all the above at one event.

If you're not yet registered to attend the UK's largest construction event, here are seven things to convince you to pop over to the NEC on 8-10 October.

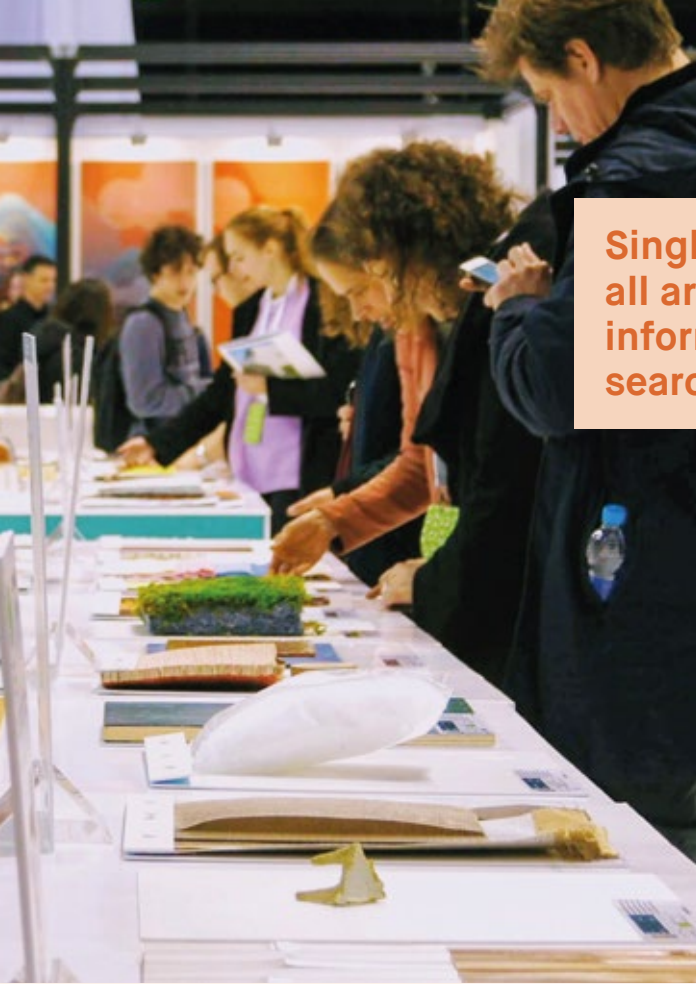
01. Products, products everywhere

Staying up to date with all the latest technology is essential to find the right product for the job. So, if you need to source a new heat pump, find a new sustainable material, or even new BIM software, then look no further than UKCW. The event has over 10,000 products being showcased, making it the ideal marketplace. With eight different sections to the show everything you need is right there.

For the second year, MaterialDistrict will have a presence at Surface and Materials. MaterialDistrict is the world's leading platform in the field of innovative materials which empowers innovation by matching material needs with material solutions. The exhibition is entirely dedicated to materials for architecture and design and will take the show's theme of innovation to present the very latest products in the global marketplace.

02. That lucky encounter

Visitors at UKCW say they won new work as a result of a planned meeting or a chance encounter. People do business with people – and with 35,000 visitors set to attend UKCW, that is a lot of potential leads. Meeting face to face is the most engaging way to do business and UKCW can facilitate that. If you have spotted a business that you want to connect with contact them through the exhibitors' portal and arrange the meeting in advance. To help with meetings, there's a new business and networking lounge with free WIFI.



Single registration gives access to all areas of the show. For further information follow @UK_CW or search for the hashtag #UKCW2019

03. Genuine innovation, not another widget

You could leave the future of the sector as a surprise. Where's the business sense in that? Disruptors are now present in many different markets, so this year UKCW is shining a spotlight on the serious change-makers in the built environment. To aid the search, a new Innovation Zone has been established in partnership with the Construction Innovation Hub (the Hub).

George Clarke's educational charity, MOBIE, has also teamed up with the Hub to inspire future designers. The Student Design Challenge asked students to design the ultimate 21st Century house. They had to consider technology, affordability, size, space, family growth, sustainability, comfort, individuality and aesthetics. The winning design will be on display at UKCW.

04. Your own personal industry MBA

With so much going on in the world of design, specification and construction the comprehensive conference programme and free CPD sessions will give further insight into key topics such as the circular economy and biodiversity with the opportunity to ask experts questions.

Hear from speakers from Homes England, Atkins, Multiplex, Mott McDonald, BRE, Passivhaus Trust, Project Etopia, bio materials expert Adaptavate, consultancy Action Sustainability plus many more. Understand more about deleterious materials, BIM, AI, modern methods of construction (MMC), the UK housing crisis and the economic forecast for the construction industry.

This year there will be more than 150 hours of CPD content available. The programme will take on a different theme for each day of the show, tackling fire safety, health and wellbeing and sustainability. There are mini-theatres covering regeneration, MMC, digital construction,

energy and HVAC, surfaces and materials, timber and the workplace. Calor Gas will be offering RIBA and CIBSE-approved CPD presentations on off-grid energy supply. Rointe Heating UK will be hosting a RIBA-assessed CPD seminar in the Energy Theatre on design innovation in electric radiators.

The show will also address day to day issues faced by practices such as mental health, work balance and diversity. The new UKCW Careers Centre provides workshops on topics such as career progression and attracting and retaining talent. There is an advice centre too for a more in-depth chat with specialist advisors.

05. A bit of myth busting on MMC

Everyone knows that MMC are back in vogue, but what is the reality this time? MMC is a strong theme at this year's UKCW. Full-scale builds will be erected onsite with live demos of MMC technology in action. Head to the MMC Hub for other digital demos and simulations too. Examples of the pre-manufactured structures at the show range from a modular care annex for the healthcare sector and a SIPS panel residential building, to a factory-finished modular bathroom pod for the high end hotel sector, and offsite solutions for the education sector.

06. An experience not easily forgotten

So, when did you last get to run a building site? Head to the Coventry University site simulator, hailed as one of the most powerful experiences of any construction show. If you're feeling brave you can step into the site hut, take on the role of the site manager. Not for the faint hearted!

07. Celebrations and a beer festival

Everyone enjoys a good awards night and UKCW is no exception. The show hosts the UKCW Role Model of the year, the new Building Trades Awards with Fix Radio and the new UKCW Construction Awards. Plus, to encourage young people into the built environment sector, the iBuiltThis competition is back and the winners will be announced at UKCW. You can unwind each day with a beer, some street food and a spot of music. The Fischer bar is in Hall 11 and the Rawlplug bar is in Hall 12. Don't forget the Beer Festival, sponsored by NBS, and of course the 'Rockaoke' on Wednesday night.

UKCW is one event with many sections, including Build, sponsored by Easy-Trim, Building Tech, Civils, Energy and HVAC, Surface and Materials, and Timber. It also features Concrete Expo (8-9 October only) and Grand Designs Live (9-10 October only).

AGM and fringe events

Glasgow 2019: Celebrating
CIAT's year and the last
Presidents' Ball



Book now
to secure
your place

Saturday 9 November

10:00

Annual General Meeting

Saturday 9 November
200 SVS, 200 St Vincent
Street, G2 5SG

Free for all members to
attend, registration required

The Annual General meeting is the yearly business meeting for the Institute, as per the Laws of the Institute. In September, following the Council meeting, timings for the AGM will be confirmed along with any Resolution(s). Please register your attendance by completing the online booking form via the website or contacting the Chief Executive's Office.

10:00

A Taste of Glasgow: City walking tour

Saturday 9 November
10:00 – 13:00
Dress: Casual with
appropriate footwear

Tickets: £10 per person
Whilst the AGM takes place, there will be a city walking tour open to all guests and partners to attend. The tour takes in the cultural and architectural sights with a coffee break.

19:00

Presidents' Ball

Saturday 9 November
19:00–01:00
Grand Ballroom, Grand
Central Hotel, G1 3SF
Dress: Black tie/long
dresses and medals

Tickets: £100 per person
Table of 10: £950
10% discount for
5+ persons

The Presidents' Ball, hosted by the President and Immediate Past President, is the Institute's annual networking and social event to celebrate the continued successes of Architectural Technology and CIAT. Tickets include a pre-dinner drinks reception, three course dinner and a night of entertainment with a live band and dancing. The Gold Award recipients will be announced and presented. This is the last year for the Presidents' Ball.

Information

Friday Centre-hosted event

Friday 8 November
18:00 (subject to change)
Glasgow City Chambers,
80 George Square,
Glasgow, G2 1DU

Tickets: £20 per person,
£10 for students. Open
to all members and their
guests (subject to space).



Updates and
information:
ciat.org.uk

Resolutions 2019

The Resolutions document for the AGM 2019 will be circulated to members by email. Those without email will receive a printed version.

Xtratherm[®]
More than insulation

Honorary Officer elections 2020: your opportunity to influence your profession

Words by: Francesca Berriman MBE, Chief Executive

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

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

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

1 President Elect/ President

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

President

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

President is external engagement, with members, fellow professionals, organisations at national and international level as necessary. Serving for a period of two-years, the President will, amongst other functions:

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

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

2 Honorary Treasurer

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

3 Vice-President Technical

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

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

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

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

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

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

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

What do these positions involve?

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

What does being a Trustee involve?

Trustees have an overall legal duty to the Institute and are the individuals who take decisions. Trustees have specific duties and operate within the rules of the Institute. Trustees work collectively as the Executive Board and once a decision has been collectively made — all Trustees are bound to support that decision. A Trustee's primary duty is to the Institute and its Charter under which it is established, as such Trustees must act with integrity and adopt the values which helps CIAT achieves its strategic aims.

What are the time commitments to these roles?

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

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

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

Representing the Institute and discipline

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

Social media

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

What do I benefit from taking on a position?

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

How can I be nominated?

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

What happens once I have been nominated?

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

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

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

If I stand how do I promote my candidacy

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

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

In this technological and social media focused world, you can create Twitter or Facebook accounts, videos, podcasts, blogs or a series of short films which support your manifesto and profile. You can get your message across simply and they can all be easily accessed. You could arrange for a Q&A with the membership at a location and venue that is accessible and could have visits to Regions and Centres and meet with Council, those who will be voting on the day. There are a number of different mechanisms which will be covered in the information pack.

What is the voting procedure?

- Regional/Centre Committees are encouraged to meet and discuss their preferred candidate, in an open forum which takes into account feedback from the Region/Centre membership;
- It maybe that you wish to proactively engage with the Region/Centre Committees to present your manifesto and respond to questions.
- Regional/Centre Committees advise their Councillor of their preferred candidate; and
- the Councillor is expected to vote in accordance with their Region/Centre's decision; however there may be exceptions where they may change their vote as per their Committee's instructions. These could be based

upon the candidate's response at the Autumn Council meeting or other factors, for example, if the candidate withdraws from the election at very short notice that would not allow a Councillor reasonable time to refer back to their Region/Centre.

How is the vote taken?

Elections are held at the autumn Council meeting:

- All candidates are invited to attend the autumn Council meeting to respond to questions brought by Councillor from their Regions/Centres or to debate a particular issue in relation to their manifesto
- Council confirms and agrees the method of the election – which has traditionally been by secret ballot;
- Councillors represent their Region/Centre – either using their agreed Committee's vote or changing their vote as per their Committee's instructions based upon the candidate's presentation or other factors;
- Honorary Officer members of Council have a free vote according to their preference (as Trustee) and considering the best interests of the Institute and its Strategic Plan;
- Council votes on the candidate and/or candidates and the election takes place;
- Council policy is that a candidate who is also a serving member on Council may not vote if there are other Candidates standing who do not sit on Council, this includes Honorary officers;
- Council policy is that Region/Centres do not have the right to send a proxy vote if their Councillor is standing for a position. It is the Councillor who

carries the vote, or their deputy, in their absence. A serving Honorary Officer who is standing against a candidate who is not a member of Council forfeits their vote. This ensures equity and fairness;

- the President, as Chair, has the casting vote if there is a tie;
- the elected Member assumes the Officer position from the close of that year's AGM (normally in November), unless an Officer resigns from their position early, in which case the assumption is either immediate or from the date of resignation if later; and
- the results are then reported to the membership via the weekly ebulletin, AT and Region/Centre Committee.

When would I assume the position if I were elected?

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

Key dates summary

Call for nominations close:
2 December 2019

Acceptances (or rejections):
19 December 2019

Manifestos/profile received:
3 February 2020

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

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

Presentation at Council:
7 March 2020

Campaigning by candidates:
24 February – 3 September 2020 inclusive

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

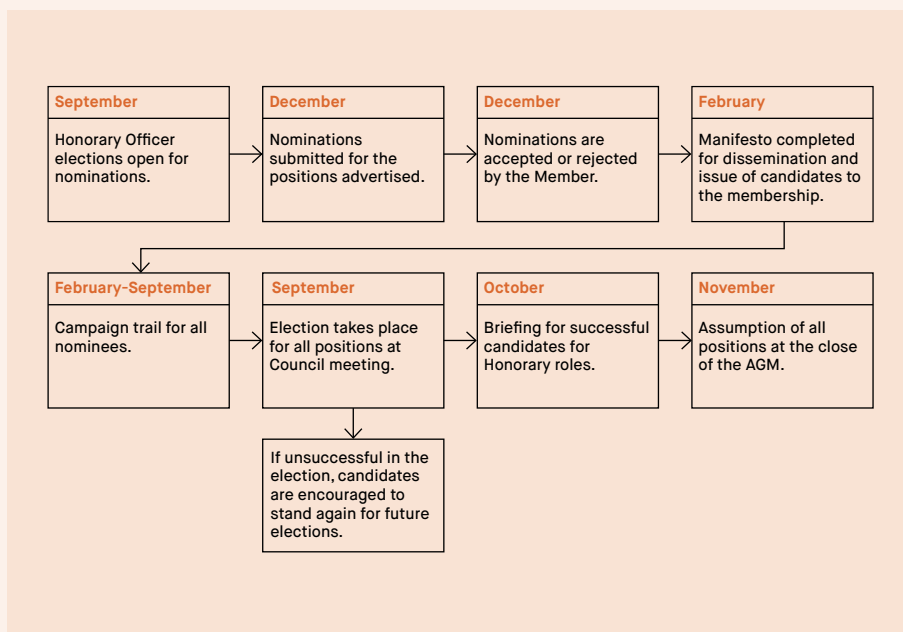
Election at Council:
4 September 2020
Candidates advised if not in attendance at Council

Ealert announcing the election results:
6 September 2020

Assumption of position:
November 2020 close of 2020 AGM

Further information

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



Election flow chart

Membership News

Chartered Members

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

014218	Jared Haigh	Yorkshire, 02
026732	Joseph Howarth	Yorkshire, 02
031439	Rob Addison	North West, 03
024449	Oliver Crisp	North West, 03
033705	Ivan Donchev	North West, 03
017782	Louise Johnson	North West, 03
017033	Warren Seddon	North West, 03
030112	David Sumner	North West, 03
017635	Jonathan Arksey	East Midlands, 04
032402	Elizabeth Bown	East Midlands, 04
027584	Tahir Caratella	East Midlands, 04
015118	Anthony Jones	East Midlands, 04
026116	Ciaran Spalding	East Midlands, 04
026440	Nasir Gamba	West Midlands, 05
024052	Raksha Mistry	West Midlands, 05
032295	Michael Beck	Wessex, 06
025756	Paul Crookes	Wessex, 06
019603	Adam Kulbacki	Wessex, 06
026033	Joanne Robertson	Wessex, 06
033121	Mitchell Addy	East Anglia, 07
025856	James Andrews	East Anglia, 07
030083	Declan Palmer	East Anglia, 07
026084	William Smith	East Anglia, 07
028367	Luke Davis	Central, 08
026241	Thomas Wragg	Central, 08
026692	Anwar Anwaruzzaman	Greater London, 09
032291	Luke Chittenden	South East, 10
022382	Tom Gray	South East, 10
031324	Francisco Hamilton Alves	South East, 10
031295	James Quigley	South East, 10
031348	Thomas Smith	South East, 10
034206	Steven Tyson	South East, 10
028204	Sam Gill	Western, 12
031517	Rick Gilroy	Western, 12
022346	Lee Mathews	Western, 12
021008	Karl Parsons	Western, 12
031547	Daniel Sherriff	Western, 12
023641	Gareth Short	Western, 12
032525	Paul Teague	Western, 12
021614	Ben Warren	Western, 12
027701	Charles Wynn	Western, 12
016528	John Braid	Scotland West, 13
023677	Callum Watson	Scotland East, 14
024945	Jill Alexander	Northern Ireland, 15
023239	John Lunny	Northern Ireland, 15
022603	Rori Millar	Northern Ireland, 15
023856	William Gill	Wales, 16
011657	Jason Smith	Wales, 16
026698	Anhony Yates	Wales, 16
032302	Geneve Barnes Nolan	Republic of Ireland, C2
029894	Mona Jakobson	Republic of Ireland, C2
033127	Nigel McGlynn	Republic of Ireland, C2

Welcome back

We would like to welcome back the following Chartered Members:

014778	Daniel Boore	Yorkshire, 02
007735	John Close	Yorkshire, 02
020901	Jon York	East Midlands, 04
016705	Niall Killough	Northern Ireland, 15

In memoriam

We regret to announce the death of the following members:

006807	Stephen Clamp	East Anglia, 07
006903	Iain Dawson	Scotland West, 13
000743	Derek Hillier	Wales, 16
007527	John Murphy	Greater London, 09
006164	Henry Simmonds	Northern, 01
010610	Andrew Wood	Northern Ireland, 15

STOP PRESS

Helena Lee MCIAT, Hong Kong Centre. A full obituary will appear in the next issue.



AT CPD Register Directory

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

CDM

Introduction to the Principal Designer Role

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

Cost/fee for attendance: £150.00

Contact: James Ritchie

E: james@jamesritchie.com

T: 07785915687

jracdm.com

BIM

BIM Level 2 Essentials

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

Cost/fee for attendance: £170

bre.ac

BIM Level 2 for Information Managers

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

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

Cost/fee for attendance: £250.75

bre.ac

BIM Strategy and Concepts (ACM015) and BIM Application (ACM016)

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

Cost/fee for attendance: £600 per module

Contact: Professor Richard Laing

E: r.laing@rgu.ac.uk

T: 01224 263716

rgu.ac.uk/bim

Global BIM Management

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

Cost/fee: €14,500

Contact: Maria Domingo,
Product Manager

E: maria.domingo@e-zigurat.com

T: 0034 686 806 623

e-zigurat.com

How Virtual Reality saves time and resources (VR for Architecture)

To demonstrate how the sensation of actually being inside a building makes VR a powerful and money saving tool for communicating design intent.

Cost/fee for attendance: a nominal fee of £10 for the VR viewer

Contact: Scott Berry

E: scott.berry@applecoredesigns.co.uk

T: 0121 447 7788

applecoredesigns.co.uk

Building Regulations Reducing the Performance Gap Through Fabric First

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

U-value Calculations and Condensation Risk

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

Cost/fee for attendance: free to groups/practices

Contact: Lee Buckley

E: buckley.lee@recticel.com

T: 01782 590470

recticelinsulation.co.uk

Rainscreen Cladding: Compliance with BR135

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

Part L1A 2013 – Fabric Performance and Towards Passive, NZEB Targets

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

Section 6 2015 Scotland – Fabric Performance and Towards Passive

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

Conventions for U-value Calculations – In accordance with BR443

Topic areas for this CPD course include Standards for U-values Calculations, Fabric Performance, Thermal Measurement and BR 443 Conventions.

Contact: Mary Maguire

E: marketing@xtratherm.com

T: +353 46 9066079

xtratherm.com

Fire**Fire Modelling for Fire Investigation and the Design of Buildings**

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

Cost/fee for attendance: £42

bre.ac/course/fire-modelling-for-fire-investigation-and-the-design-of-buildings

Fire Stopping and Compartmentation

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

Cost/fee for attendance: £250

bre.ac/course/fire-stopping-and-compartmentation

Other**Biophilic Office Design**

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

Cost/fee for attendance: £10.50

bre.ac/course/biophilic-office/

BREEAM Associate

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

Cost/fee for attendance: £195

breeam.com

In the Beginning: It all Starts with a Raised Access Floor

This CPD takes place in the form of a presentation, alongside the showcasing of product samples and equipment for a hands on approach, usually within a practice over a lunchtime period. Bathgate Flooring can also offer the presentation from either of their 2 offices in Hereford and Warrington, with Hereford offering a factory tour of the manufacturing process.

Cost/fee for attendance: Free of charge

Contact: Darrin Andrews

E: d.andrews@bathgateflooring.co.uk

T: 07800 748930

bathgateflooring.co.uk

Loft insulation isn't working – what can we do about it?

A one-hour online CPD module by LoftZone will explain the 'in-use factors' that limit the effectiveness of loft insulation; the research by the National Physical Laboratory and Carbon Trust that show how widespread these factors are; traditional insulation and building methods which are no longer appropriate; alternative techniques to maximise insulation performance; specific design considerations and a U-value calculator and safety requirements in lofts.

Cost/fee for attendance: free

Contact: Dave Raval

E: cpd@loftzone.com

T: 01483 600304

loftzone.co.uk

Safe-R

Superior Performance Phenolic Insulation

Safe-R is a superior performance phenolic insulation with a Euroclass B Fire Classification. It is faced with low emissivity foil facings on both sides and has a Lambda value as Low as 0.020 W/mK.

Product Features

Euroclass B Fire Classification

Lower Lambda Value for improved U-Values

For New Build or Refurbishment

Reduced Thermal Bridging

AS LOW AS
X020
Xtratherm

EUROCLASS
B FIRE
CLASSIFICATION

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More than insulation

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