

AT

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Awards special issue



Chartered Institute of
Architectural Technologists

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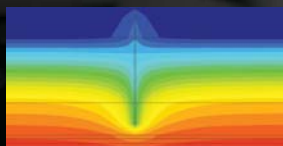
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From the editor: AT relaunch 2013

Alie is halfway round the world before the truth has got its boots on', someone once said. A modern paraphrase might be 'an email is halfway round the world before a magazine is off the printing press'. In short, the way we communicate has changed rapidly in recent times – and AT magazine needs to catch up.



Following a review with the membership and with approval from your Council and the Executive Board, AT is changing. From next March, you will receive a newly designed, larger, quarterly publication, written by members as well as leading professionals, academics and industry representatives.

Institute news, coming events and news items will feature less in the magazine and more prominently on the website, social media and *Weekly Bulletin*. To this end we invite you to ensure that we have your current email address. This is vital as more Institute communications are sent electronically; speeding up communication and keeping news current and relevant.

We also invite you to provide your ideas or write articles on projects, current topics, technical issues or similar that would be relevant for your fellow members and fellow professionals. Please email me at hugh@ciat.org.uk with your ideas.

With best wishes for Christmas and New Year,
Hugh Morrison
Editor

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Open Award

The Open Award for Technical Excellence in Architectural Technology is the Institute's premier Award and entrants must demonstrate their achievement of technical excellence in construction by illustrating the composition of ideas put into practice and presented in a working format.

Winner

Avery Associates Architects for Repton School theatre

Repton School in Derbyshire is an independent school whose campus forms a major part of the Repton village Conservation Area. The school's existing theatre, the 400 Hall, is a significant building within the campus due to its strategic location at the confluence of key routes and its proximity to the historic centre of the school and the principle village high-street.

To keep the existing building intact, a new 315 seat auditorium has been squeezed into the shell of the old hall and a new foyer built alongside.

This new foyer has been set at a 30° angle, in part to counterpoint the axial symmetry of the 400 Hall, but also to respond to both the picturesque irregularity of the site and the important diagonal line-of-sight that links the hall to the school Chapel. This reflects also another linkage, a 60° diagonal view in the other direction from the foyer towards the site entrance and the historic arched entrance to the old school beyond.

These angles have been reflected in the foyer planning-grid which is a rhythm of equilateral triangles, expressed formally in a dramatic top-lit white glass prism within the foyer. This provides an ever changing light display by day and forms the backdrop at night to a small performance space.

Inserting the new, flexible auditorium and associated air-handling and technical theatre equipment into the existing brick hall posed several technical challenges.

Firstly the existing brick proscenium opening had to be widened considerably to allow adjustable proscenium flaps to be installed to tailor the space to a wide variety of theatre formats.

Secondly the existing hall floor had to be replaced with hand adjustable, stage-levelling equipment to allow the stalls to be either raked for traditional proscenium arch productions or raised to the level of the stage for 'in-the-round' performances, dances, examinations etc.

Thirdly to accommodate the stage lighting the existing ceiling had to be removed to enable the roof void above to be utilised as a tension wire grid facility. This required several very large new steel beams to be threaded through the existing trusses but this was achieved

without taking up any of the existing copper roof, thus saving considerable time and expense.

Lastly, in order to keep the theatre's running costs as low as possible and to minimise the carbon footprint, a fan-assisted natural ventilation system had to be devised to extract stale air from the roof void above the tension wire grid with cool fresh air supplied from a plenum below the stalls.

The auditorium is thus an entirely controlled internal performance environment with almost no external impact on the shell of the hall.

In complete contrast the new glazed foyer is two-thirds glazed whereby to embrace the campus landscaping and draw the audience towards it. The glazing is in panels with a 2:1 ratio, 3.3m high by 1.65m wide (the average person's eye level) and a generous cantilevered canopy shelters an external terrace and helps reduce the reflections on the glass to maximise transparency.

As it is anticipated that the theatre will receive very heavy usage the materials have been selected with this in mind, using simple and robust fixings. In the auditorium for example, a very tough woollen seat fabric and 80-20 carpet were used and the stalls floor was finished

Photos courtesy of Tim Stallion



“

The auditorium is an entirely controlled internal performance environment’



with a Danta hardwood for its ability to absorb and conceal the nail holes from in-the-round performances.

The entire project was delivered to time and budget and the school now has a facility at least the equal to any contemporary performance space of its size in the UK.

The commendation by the Headmaster, Robert Holroyd following completion summarises the project's success: 'Of all the architects short-listed for Repton's 400 Hall Theatre development, Bryan Avery was the one who best understood the school's needs and the complex relationship between the theatre itself and its historic surroundings.

'It was for this reason that we appointed him, and Bryan fulfilled our expectations completely by giving us a design that was at once imaginative, sensitive and wholly attentive to detail. I am delighted with the completed facility and recommend Avery Associates to you most warmly.'

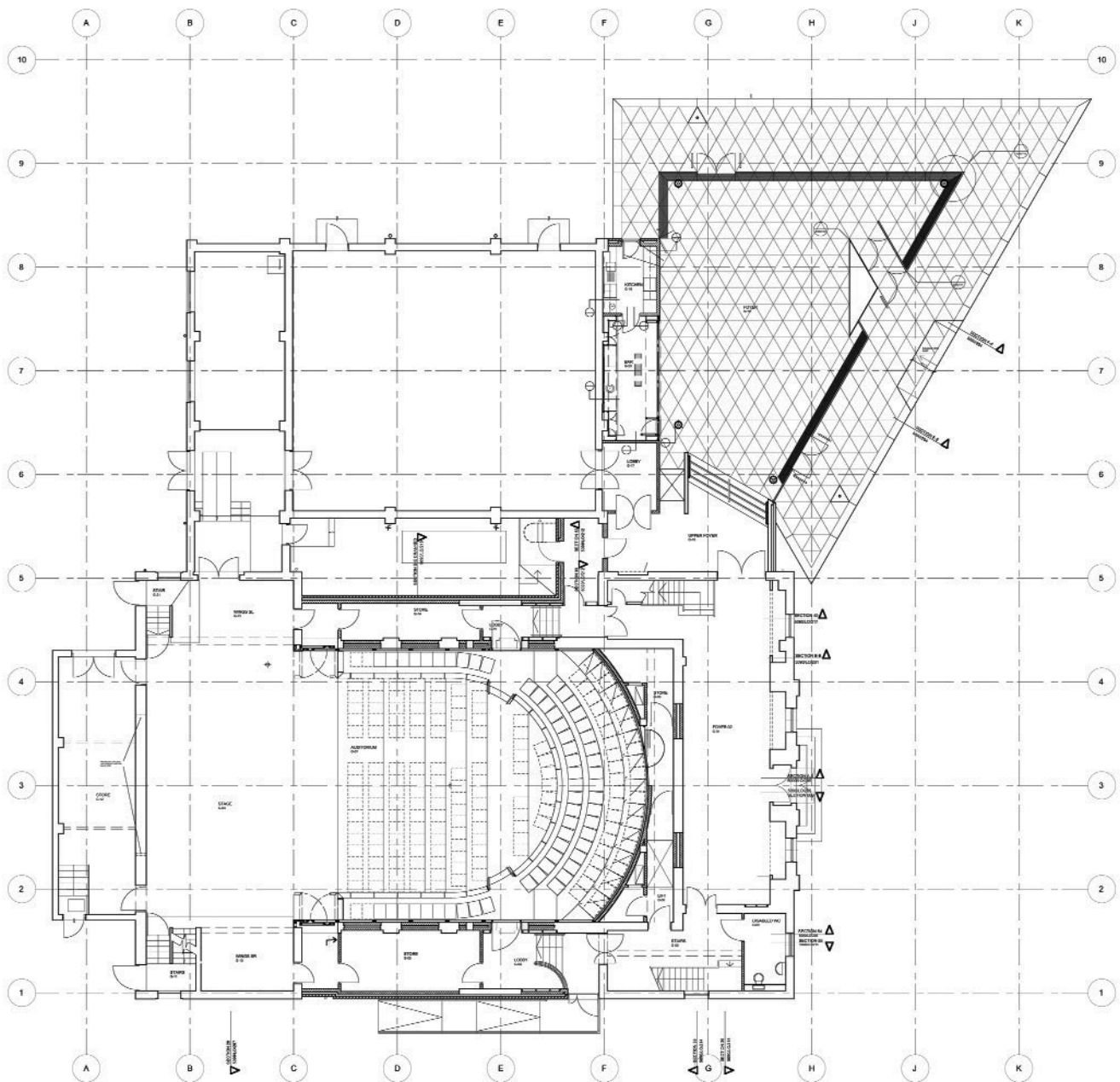
Bryan Avery said on receiving the award: 'We are deeply honoured to receive this Award. It is the only Award that specifically acknowledges the technical challenges faced by designers and it is hugely encouraging therefore to know that our delight in innovative and elegant solutions to these technical issues has been so much valued by others.'



Left: the original exterior with new foyer. This page, top: the new foyer. Below: the interior of the theatre.



Left: the Repton
foyer.
Below: plan of the
400 Theatre and
foyer



L-R: Commended Daniel Asher ACIAT and Russell Ward from Benoy Architects, Winner Anthony Carlile from Avery Associates Architects with Carl Bilson (client) and Adrian Hollis MCIAT, Highly Commended



Highly Commended Adrian Hollis MCIAT, Lewis and Hickey for Myplace @ Westfield Folkhouse

The brief for this project was to deliver an iconic youth centre facility, within budget, that included the extensive refurbishment of an existing grade II listed building. The project would need to integrate a contemporary new-build, with feature landscaping and activity spaces to meet the needs and aspirations of young people and promote their personal development.

User groups from all aspects of the youth community had to be consulted to ensure the centre focused on social co-operation. The brief also required flexible internal spaces and external activity zones. The site had to be carefully maximised and treated in an interesting and sympathetic manner to its surrounding environment.

Within any typical project, inclusive design needs to be carefully considered. This scheme

was neither typical nor ordinary. The inclusive design challenge was not treated as set of regulations to be adhered to nor was the approach a tick box exercise to meet the needs of a set of standards. Working alongside project colleague Myke Blackburn MCIAT, the team aspired to produce a youth centre that not only provided physical inclusion for all the different and diverse user groups but aimed to increase the social inclusion and integration of the wider community.

Accessibility and inclusive access for all has been well planned, designed and implemented. Level access in and around the existing buildings has been radically improved. Large open spaces with loose furniture offer flexibility and manoeuvrability. The inclusion of a lift serving both the old and new building provides upper floor access where access was previously restricted within the old buildings.

Toilets for the less-abled were purposely positioned and designed within the main toilet areas to aid social inclusion. Signage, lighting and information technology allows integrated systems to be easily controllable whilst providing use and stimulation. Finishes and features

have been specified to offer interest, contrast and robustness. The new build envelope is wrapped around a curvaceous steel frame with a traditional wall construction, finished in stone, render and aluminium. Extruded feature window pods enhance a contemporary design, whilst a glazed link that adjoins both old and new buildings together ensures that its contemporary approach provides visual interest but also blends harmoniously with the adjacent historic building.

During the restoration works to the existing buildings, the method and strategy was always to 'conserve and repair' utilising skilled trades and undertaking traditional methods of preservation and repair. This philosophy ensured all parties involved had a clear understanding of the priorities.

Through detailed design and the formulation of a robust specification, skilled joiners and plasterers were instrumental to achieving a high quality finish within the listed buildings. Repairs utilising different lime mixes for mortars, plastering and decorative mouldings were used throughout.

(Continued overleaf)



Above the decorative friezes, insitu cornices were crafted to match existing moulded features and timber routers used to match the historic profiles found on skirtings and architraves. Enriched picture rails and feature moulded cornices also received professional attention and repair.

Specialist stone masons undertook restoration. Internal stone floors and the main feature staircase received paint removal, stone indent repairs and light chemical cleaning. External stone works also included indent repairs, light cleaning and replacement mortar. Where elements were beyond repair, existing stone blocks and slabs were cut down, timbers spliced and glass re-cut.

From a sustainable and energy performance aspect, several meters and sub-meters have been installed on the project for energy monitoring. For electrical energy and heat consumption, meters were installed to indicate the energy used by the lighting, power and heating output of spaces. In addition,

water meters were installed to demonstrate hot and cold water consumption and levels of rain water reclaimed. The rain water recycling system has supplied approximately 40% of the water required. To support reducing water consumption further, simplistic but effective design specifications such as PIR sensor controlled taps and urinals, alongside the specification of low flush toilets were installed.

Adrian Hollis MCIAT said 'To receive the Highly Commended Award for technical excellence is a real honour and I am personally very proud to receive this award from CIAT. The outcome of the project reflects, through both the historic restoration and contemporary new design, the level of detail and the dedication of all the team at Lewis and Hickey who have helped ensure that Myplace@Westfield Folkhouse is now an innovative and inspiring youth centre'.

**Right: the main entrance.
Below: the first floor 'media wall'.**



“

The rainwater recycling system has supplied approximately 40% of the water’



Commended Benoy Architects for the Institute of Mental Health offices, Nottingham

The new office facility provides a home for the Institute of Mental Health which unifies the various disciplines of the organisation providing a central location for research. The design incorporates various sustainable technologies and passive design features such as rainwater harvesting, air-source heat pumps, high-levels of insulation, solar shading and exposed thermal mass which work holistically to create a sustainable building that achieves an 'Excellent' BREEAM rating.

The east-west orientation allows the office to focus on the southern aspect therefore taking advantage of solar gains; glazing is maximised to encourage natural daylight penetration. The expression of the two central floors is achieved using a tonal array of red terracotta rainscreen which projects out from the main building line. The projecting terracotta returns along the western elevation before making way for a glazed feature wall which frames the building's feature staircase. The northern façade has a more solid treatment and strong repetitive rhythm in its fenestration, staggered windows

with a combination of white and red aluminium rainscreen panels complete the elevation.

The building is split over four levels with the main entrance located on the western elevation which leads into the building's primary circulation core – an elegant feature stair provides a communication link with the upper floors which has been detailed to appear as if floating within the stair void.

The building's detailing was carefully considered from the project's inception, there are many ideas which were incorporated into the design. The building was designed in order to expose the concrete soffits of the floor slabs in order to provide free cooling by utilising the thermal mass of the concrete. Another example of sustainable innovation was the specification of pre-fabricated Structurally Insulated Panels (SIPs) which were designed with low U values in order to reduce heat loss.

A rainwater harvesting tank was specified to provide water for toilets, and rainwater from the roof is transferred to the below ground tank before being filtered and fed back into the building. Solar shading and a large overhanging roof to the southern elevation provides shading to the office spaces. In addition, high spec glazing was specified which

helps to dramatically reduce heat gains from solar radiation while also offering excellent insulation properties.

The building's structure consists of steel columns and beams which provide support for pre-cast concrete floor slabs of which the soffits are exposed. A raised access floor sits on top of the concrete floor planks creating a void for the transfer of M&E plant throughout the length and width of the building.

In terms of the buildings services; an integrated heating, cooling and ventilation system serves the offices which utilises the hollow cores of the structural floor slabs to provide fresh air distribution whilst at the same time using the mass of the building to provide thermal stability. The primary heat source is derived from a combination of biofuel CHP plant (located in an adjacent building) and high efficiency air source heat pumps which are concealed within the buildings service core.

Daniel Asher ACIAT of Benoy said 'We are extremely proud that the project has received the Commended Award, and believe that this accolade further reinforces the successful design and delivery of the project by everyone involved.'

Alan King Award



Entrants in the Alan King Award must demonstrate their achievement of technical excellence in construction by illustrating the composition of ideas put into practice and presented in a working format, for projects valued £750k or under.

Winner

Hall Black Douglas
Private residence,
Hillsborough, County Down

This building sits comfortably within a wooded site, with a dynamic orthogonal plan interweaving through the trees on a north/south axis. The axial walls extend and diminish into the landscape, reinforcing the geometry yet giving a series of private, formal and working external spaces each relating to their internal use. Each element of the new structure has been sensitively scaled to complement the main central block with the family living/lounge area tucked behind the stonewall, helping reduce the impact when viewed from the road.

The view from the road is minimised, once again softening the scale and impact of the dwelling. The height does not exceed the height of any existing ridge line on the site, in order to integrate into the surrounding landscape. Level access is incorporated into all the entrances.

The building uses a mix of construction techniques. The main body of the house is steel framed which helps form the cantilevered sections. The frame was then infilled with a

simple cavity wall construction isolated from the steel structure to reduce any potential for thermal movement, leading to cracking. The external walls are made up of 215mm inner leaf 150mm cavity with 100mm insulation and 100mm outer block leaf. The ground floor is an insitu ground bearing concrete slab with 125mm insulation and 100mm screed. The first floor is a precast concrete slab with 50mm insulation and 100mm screed.

The roof is made up of the steel frame with timber joists with 150mm insulation between and on top of the joists. The roof is then decked in plywood to take the zinc and acrylic render finish to the ground floor wall, garage and side walls. The windows are a polyester powder coated aluminum window with high performance glass. The flat roofs are ballasted single ply pvc roofing membranes.

Evidence of life-cycle costings and assessment It has been calculated that the additional energy saving measures (beyond the requirements of the Building Regulations) have a payback period of six years approximately, based on energy costs in 2010. Low or zero maintenance products have been utilised throughout such as the aluminium doors/window, zinc cladding and stone walls.

A high level of craftsmanship was maintained throughout the project. Tendering contractors were hand picked with a proven track record

with an emphasis on quality and craftsmanship. Natural materials were specified throughout including local Donegal shale for the feature walls and hardwood from certified sources.

Underground air ducts serve the whole house ventilation, tempering the fresh air intake to around 16 degrees Celsius all year round. This largely untried theoretical model has proved to be highly efficient. Solar water panels provide approximately 55% of domestic hot water needs. High levels of insulation to near passive house standards, orientation and high efficiency glazing make this dwelling both sustainable energy efficient. A small oil fired heating boiler linked to underfloor heating provide any additional heating requirements in winter months.

The budget for this building was extremely tight with initial estimates for the detailed design calculated at approximately £900k. A value engineering exercise was implemented which reduced the budget to 700K with an eventual final account figure of £725k, which included additional landscape features.

David Black, Director at Hall Black Douglas said 'We continually strive to produce architecture which is both contextually appropriate and fulfils our client ambitions and aspiration. To receive such an Award affirms those goals.'

Highly Commended Stuart Davidson MCIAT, Stuart Davidson Architecture South Lodge, Burnhouse, East Dunbartonshire

South Lodge had stood derelict for around 20 years due to its small footprint and restricted site conditions occupation had become untenable. Stuart Davidson was appointed to create a contemporary conversion of the existing structure focusing on retaining and preserving the original gatehouse's charm.

This created many challenges both for the design and construction. In addition, planning restrictions expansion meant merging usable spaces and removing any unrequired circulation space. The pedestrian access and original front door at the roadside was blocked off internally with the original door and ironmongery retained externally ensuring the character of the property was maintained, and that valuable floor space was freed.

The sloping land was utilised to create a volumetric space at the rear of the property, using the land form and existing mature tree belt to blend the extension into the landscape. The material choice was paramount to the design, to clearly separate the old and new construction. To do this a number of structures and materials were considered such as large format single skin timber structure. At the client's personal request this was adapted to include a structural external leaf and the material palette simplified to natural stone with a white smooth render to reflect the traditional building materials of lime and stone with a modern twist.

Window openings and junctions were a significant area of detailed discussion and specifying such as the full length gable windows which had to be uninterrupted by the first floor construction along with being low impact. These were fully detailed forming the jambs with random stonework creating crisp corners and hidden lintels reducing the impact on the surroundings.

The project was used as a pilot of a simplified airtight construction system detailed and designed by the practice. The internal leaf is formed with a service space on a sealed leaf construction utilising two layers of OSB3 with all joints sealed with aluminium tape either side of a traditional 145mm frame filled with high performance rigid insulation. The insulation choice was considered over a long period of time with the initial preference of sheep's wool or hemp insulation barred on cost grounds. The focus was then re-aligned to reach performance targets resulting in the full fill choice. Areas such as floor and corner junctions were constructed to remove draught routes, minimising cold bridging, and all tapes are held in place in sandwich style

internally, to remove lifetime degradation. The construction was further simplified by utilising a recycled plastic cavity former to the rear of the stone gable wall giving structural support directly onto the timber frame.

Demolition did not create large amounts of waste – a minimum of 70% of all materials removed from the existing building were re-used or recycled on site. This was exceeded with removed stone including a large redundant chimney breast being sorted on site and used on the extension gable. Unusable stone and concrete were crushed on site and used for the new access track, slates were sorted and re-used on the reformed roof and all removed timber cut for use on the stove, providing free heating.

Stuart Davidson said 'I am absolutely delighted to receive recognition for such a prestigious Award. The clients allowed me to have full design control which required some complex details. This makes all of the hard work so worthwhile.'



Above left and right, the rear of the property before and after alterations. Below: the rear showing extension.



Top: external view of the Alan King Award winning project.
Inset: Alan King Award winners: I-r Stuart Davidson MCIAT,
Robert Clarke MCIAT and David Black.
Below: bedroom in South Lodge, Highly Commended.



Student Award (Project)

Entrants must demonstrate their achievement of excellence in Architectural Technology by illustrating the composition of ideas put into practice and taken from a university/college assignment or a live project. This year's winner envisages a 'deep green' centre in Yorkshire's Dearne Valley.



Winner

Tony Buck

Sheffield Hallam University
Dearne Valley Eco Centre

The proposed scheme is located on the former 'Earth Centre' complex, a project funded by the Millennium Commission. Due to lack of visitors, the Earth Centre was closed in 2004 providing the opportunity for Kingswood, (the new owners) to re-develop the site. They aim to incorporate sustainability to the site development, including refurbishment of the existing buildings as well as developing new buildings and infrastructure to create an international residential Education Centre.

The new Dearne Valley Eco Centre proposed is located in a prominent position, acting as the entrance to the new complex. Integrating design conscious ideas and sustainable building techniques, the new Eco Centre acts as a iconic landmark to the complex, encouraging

members of the public to visit. A new proposed landscaping scheme consists of trees, shrubs and sculpture, with permeable paving materials to help attenuate water runoff and reduce localised flooding.

An existing reed bed is re-instated, offering a sustainable and natural method of dealing with waste water, reducing the load on local sewage facilities. A new contemporary bridge structure creates a wider singular access to the site. The existing concrete structure is recycled to form aggregates in the concrete floor slab, pile foundations and site backfill for the new building.

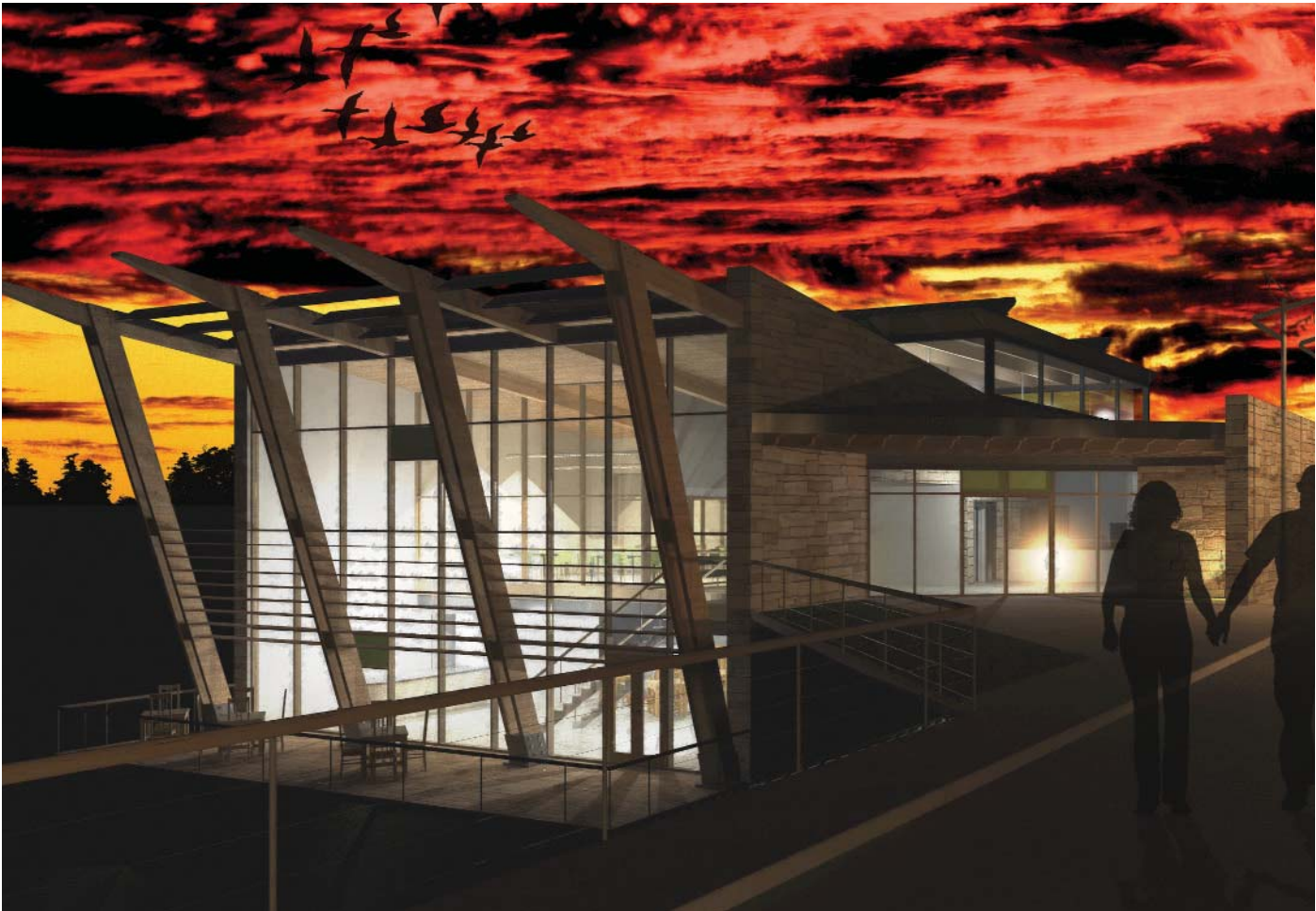
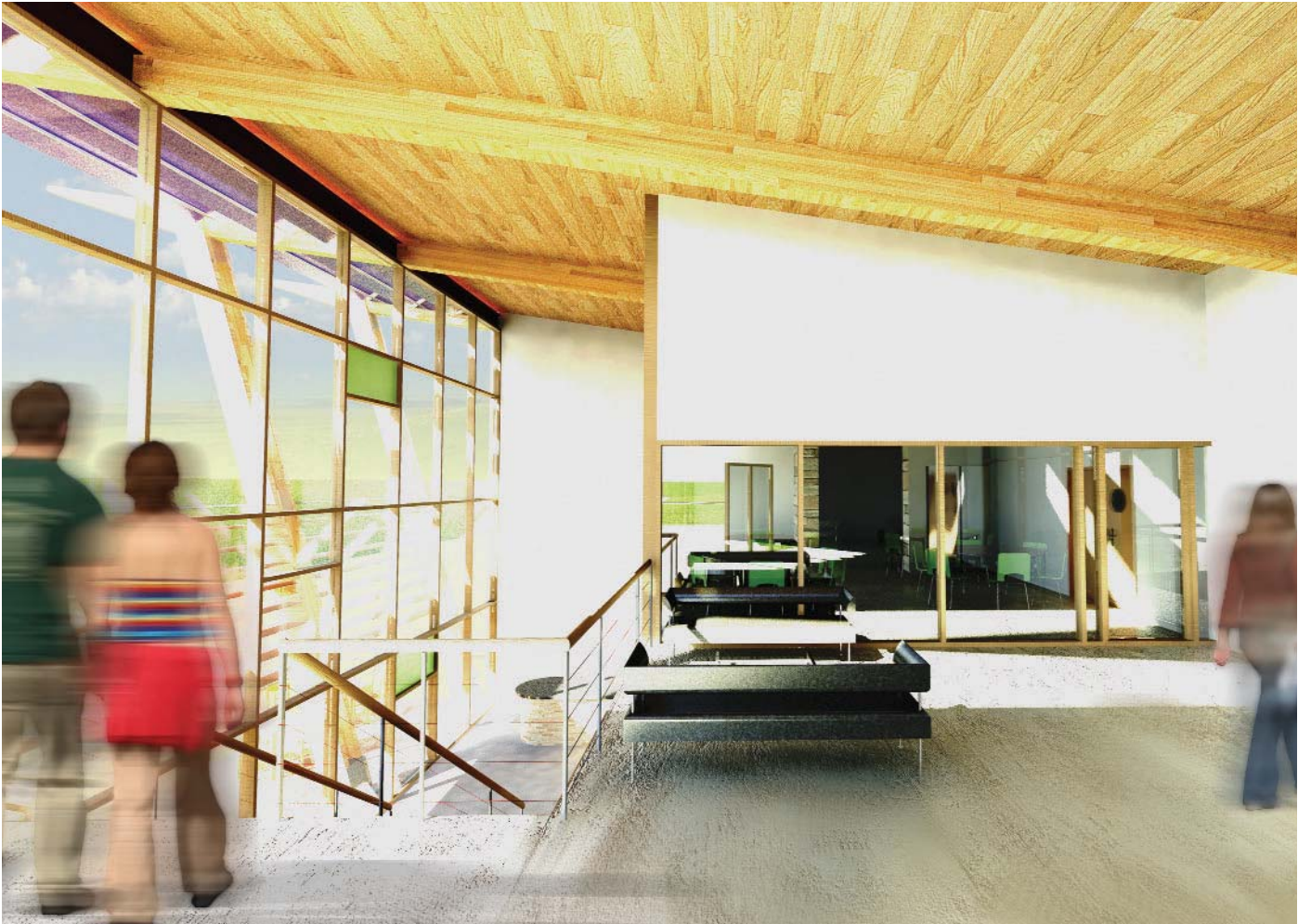
Towards the east of the complex, a biomass plantation and manufacturing facility are situated, for the purpose of supplying fuel for the biomass boiler. Car sharing schemes, new local bus routes and train travel are encouraged for both staff and visitors.

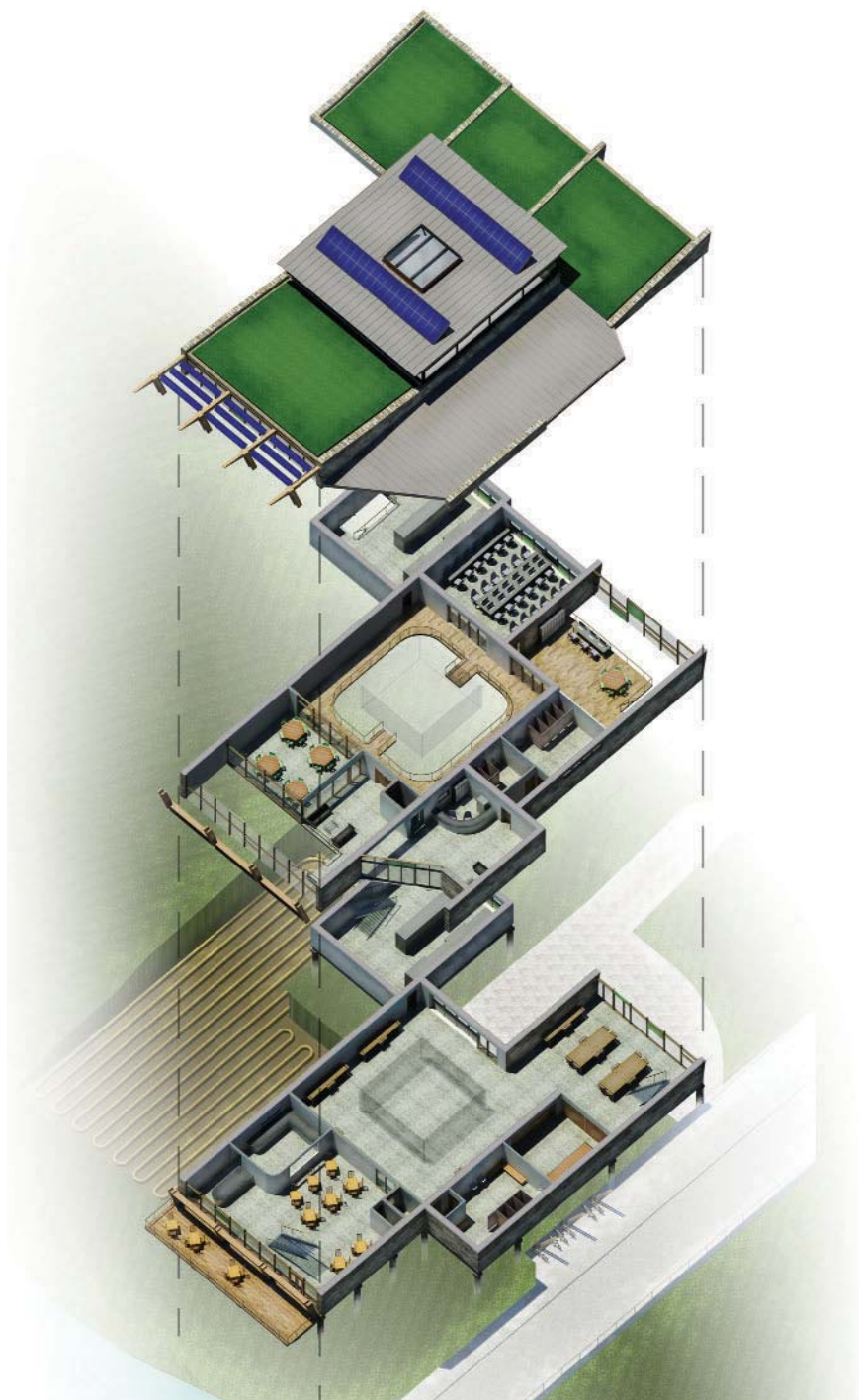
All the systems employed are proven and typically used for buildings of this scale. As none

of the systems is particularly innovative, it results in a simple build whereby realistic schedules can be applied and achieved. A quick and simple construction means less site disruption and reduced risk of going over budget.

The primary structure is provided by a structural steel frame. This can be locally sourced from Sheffield and offers a quick erection time and the opportunity to recycle the frame at the end of the building's lifecycle. A secondary MetSec frame forms the structure for the stone and timber cladding systems.

Concrete based floor systems, provided by Charcon are manufactured off site and provide excellent U-values, structural stability and thermal mass properties. A Zinco green roof system covers a large portion of the roof area. In addition to their obvious aesthetic, biodiverse and sustainable credentials, the green roof controls and naturally filters the rainfall which is harvested as part of a grey water system.





Highly Commended

Mark Irwin-Childs ACIAT, Nottingham Trent University Nottingham Aquatics Centre: The Whale

The concept for an aquatics centre in Nottingham came about during the initial study into the site. It became apparent that the nearest olympic length swimming pools to Nottingham are at a distance of approximately 20 miles.

There were a number of concepts considered in order to design an iconic structure, most of which revolved around water in order to relate the building design to its purpose. The final concept combined the forms of a great whale and ship design.

The structure consists of a series of interconnected parabolic arches, tying in well with the conceptual design resembling both the skeletal structure of a whale and the design of a ship's hull. The widest arch in the design spans 55 metres.

The drive for sustainable design encouraged the use of engineered timber as an alternative to steel. After consulting a structural engineer it was agreed that glulam would be suitable for the spans at a depth of 1000mm by a width of 450mm, each arch at 6500mm centres. A series of concrete buttresses were designed to receive the force being exerted by the glulam arches, the structure is submerged eight metres underground and the retained earth was used as means to brace the buttresses (abutments) to equal the force being received on to them.

The roof of the building is designed with an aluminium standing seam sheet roof; this material was specified due to its lightweight properties to reduce load on the glulam. A metal roof is also resilient to wind, rain, hail, fire and biological decay. It is completely watertight and can be laid to any pitch or roof shape making it an ideal choice for this design. The final material used in the building design was ETFE. This material is super-lightweight and a cost effective substitute for glazing; utilising maximum daylight without the same level of heat loss.

This page, top: exploded plan of winning entry.
Below: Matt Padley (left) and Mark Irwin-Childs receive their certificates. Opposite, top: internal view.
Below: the centre by night.

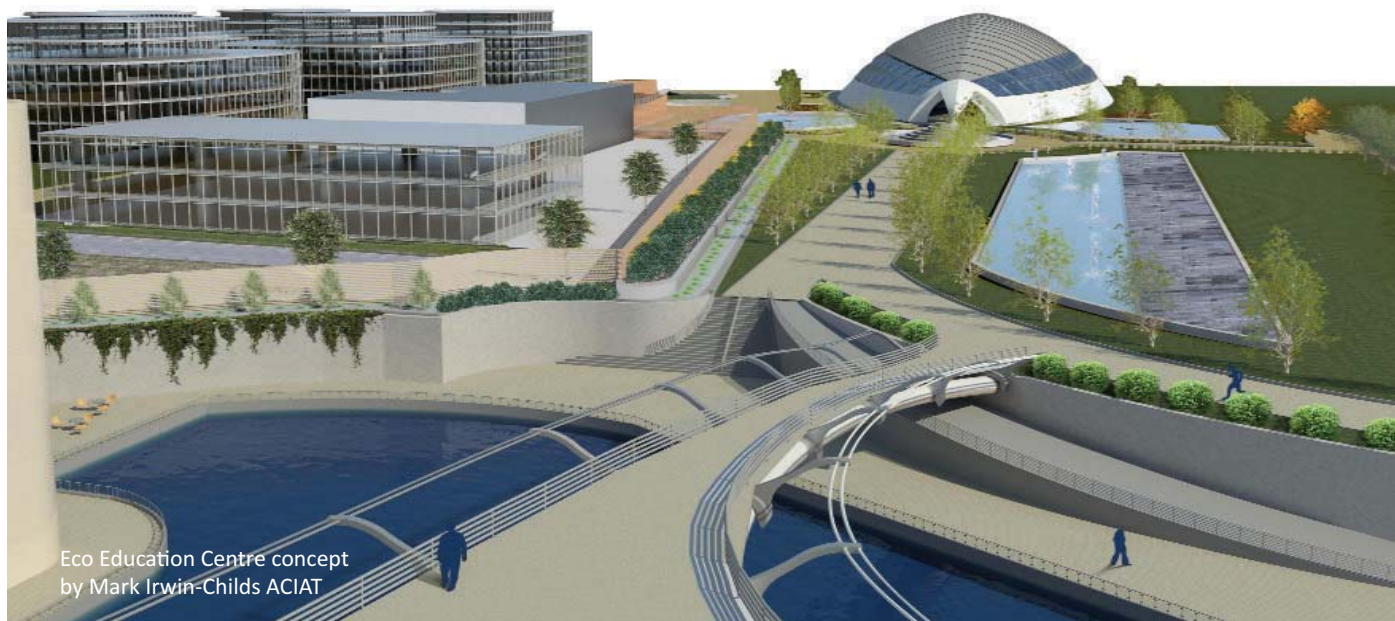


(Continued from overleaf)

The design incorporates ETFE in a strip around the structure creating an effect that the aluminium section is floating above the building. The building is orientated in a way which maximises the level of natural daylight entering the building during the day, the design of the interior utilises staggered tiered levels and large amounts of frameless glazing to allow daylight to travel deeper into the building.

The aquatics centre has been designed to be energy efficient. As well as a highly insulated envelope the majority of the structure is submerged up to eight metres underground where the poolside area benefits from the insulation of the retained earth in addition to the building structure. Above ground the building form deflects head on winds reducing the cooling effect on the building's outer surface.

Mark commented 'To be highly commended in the CIAT Student Award is an honour. It comes in the same year as being awarded the Outstanding Graduating Student Award, and an award from Balfour Beatty for my degree show project. These successes have been unexpected and completely overwhelming... I owe thanks to so many...however I'd like to give special thanks to my university tutor Vince Conway for his guidance.'



Eco Education Centre concept
by Mark Irwin-Childs ACIAT

Highly Commended Matt Padley ACIAT Sheffield Hallam University Eco Education Centre

The Eco Education Centre, located at the Earth Centre, Doncaster, is a landmark building which allows visitors of all ages to learn about the environment, sustainable technologies and green building design.

The site design was key to the interaction between the Eco Education Centre and the wider Earth Centre site and includes a number of features, such as a viewing gallery over the River Don, allotment garden where fresh fruit and veg can be grown for use in the adjacent Cafe and walkways out to the adjacent reed beds. These features allow the visitors to interact with the landscape and ecology and learn about the surrounding environment.

The Eco Education Centre has an elliptical plan that works with the existing site topography and highlights the various changes in levels with an extensive landscape strategy. The building's facade uses glazing, timber walls and vertical timber fins positioned around the entire building to create a contemporary

design. The interior of the building has two main areas; the large exhibition space to the south and teaching spaces, stacked vertically to the north, overlooking the Earth Centre.

The building includes a large number of the environmental features so visitors can see immediately the sustainable technologies used within its design. These have been chosen to relate to the environmental and ecology teaching strategy, such as the reed beds for rainwater harvesting, the green roof to provide habitats for various insects and birds and the vertical timber fins and green wall planting for solar shading.

The two main areas inside the Eco Education Centre, the exhibition space and the teaching spaces, have different environmental requirements so the challenge was to create an adaptable solution to optimise passive environmental design that is both visible to the visitors and highly interactive and controllable for use as a teaching resource.

The south facade around the exhibition space has been designed to utilise natural stack ventilation with low level BMS controlled louvres allowing cool air in and openable rooflights allowing warm air out. Natural daylighting is provided to the display areas

from the large south facing windows and north facing rooflights. The rooflights also include south facing photovoltaic panels which can be used to generate energy to power the underfloor heating throughout the building and the lighting in the teaching spaces. Solar heat gains on the south facade are minimised by using the vertical timber fins, green wall planting and BMS operated blinds.

The teaching spaces require more heating and cooling than the exhibition space so the north facade is constructed from highly insulated timber walls to help maintain the temperature within the classrooms. The teaching spaces are heated by a low energy underfloor heating system using the energy generated by the photovoltaic panels and cooled by a radiant cooling system in the ceiling that uses rainwater collected from the roof and the reed beds. Borrowed light from the exhibition space, natural daylighting from the north facing windows and low energy lighting are all used in lighting the classrooms.

'I am very honoured to have received this Award' said Matt. 'To have my project recognised as a such a strong entry has given me a lot of confidence in my ability as an Architectural Technologist as I continue in my career.'



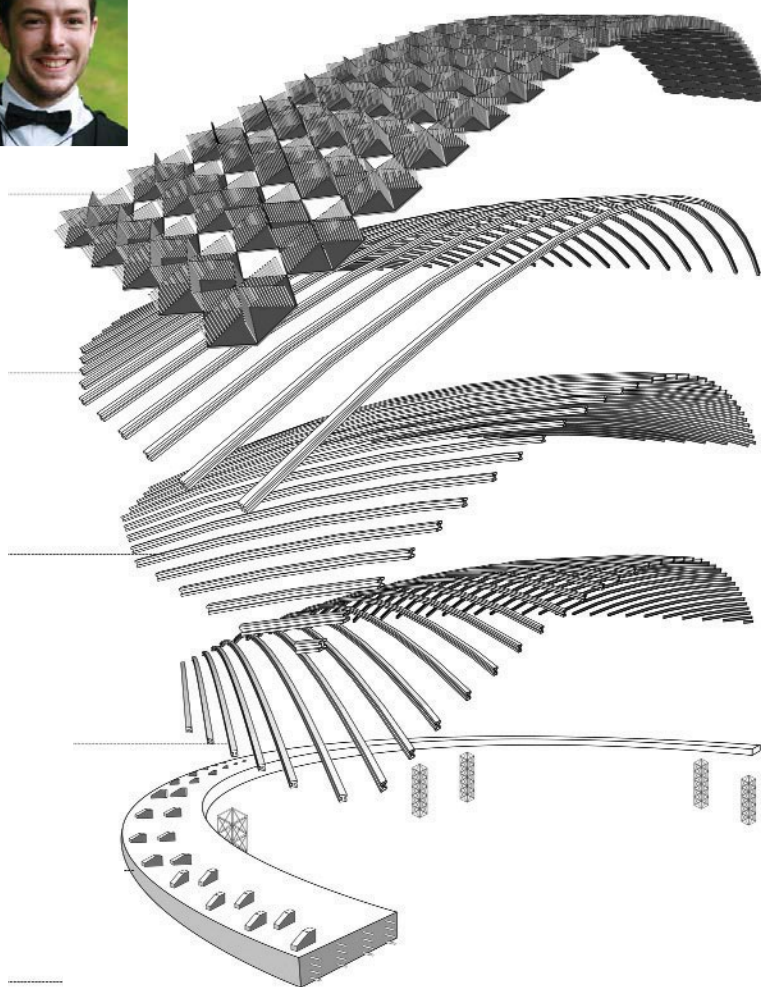
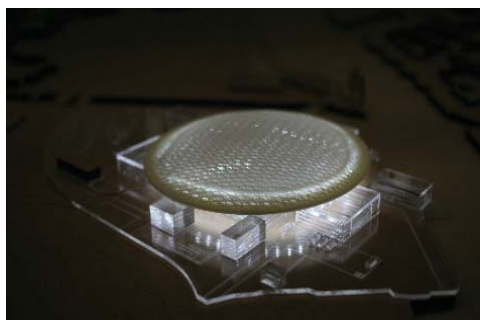
Commended

David Weir-McCall ACIAT,
The Robert Gordon University
Design for Sport



This project looks at Commonwealth venues and re-imagines them with a focus on post-industrial brownfield sites. A new development zone has been created with a training base and sporting venue. David's ambitious design of an iconic landmark building draws upon new technologies to create an innovative functional space and is well contextualised. This is a conceptually outstanding project, which showed some excellent innovation.

David said 'I was absolutely speechless to hear I was commended for the award, the project and the design was very outgoing and I felt I pushed the boundaries on structural design too far with the grid shell dome and the environmental technology in the panel roof system. I was very glad to see that challenging it has paid off. I am so grateful to receive the award and hope to carry on developing my knowledge and skills within Architectural Technology.'



Top: Eco Education Centre concept. Below: David Weir-McCall ACIAT.
Above: Design for Sport isometric. Left: Design for Sport model

Student Award (Technical Project)

The Technical Project Award for 2012 sits alongside the existing Student Award and recognises the writing and research skills of students. Entrants must demonstrate their achievement of excellence in Architectural Technology by illustrating the composition of ideas in the form of a technical report or academic paper based on a dissertation or research assignment.

Highly Commended

Daniel Bates

University of Derby

Investigation into the Buildability and Cost-Effectiveness of Passivhaus Refurbishment

This investigation looked at the issues, both technical and practical, surrounding Passivhaus refurbishment through various case studies.

To be able to influence and regulate the environment is a sign of the evolutionary ability to adapt, from birds creating nests to people building houses. Being able to create comfort against the external environment is an evolutionary gift. Recent developments globally are necessitating a close look at how we use buildings from an energy point of view. Energy in the construction and use of buildings accounts for over half of UK energy use. In addition, the slow growth of the housing stock at less than 1% per annum calls for a close look at the existing stock for refurbishment.

The report focuses on the buildability and cost effectiveness of refurbishing a dwelling to Passivhaus or EnerPHit standard. One of the repeated issues found during the case studies has been airtightness. It is difficult to meet the required levels of airtightness in refurbishment projects due to having to work around an existing structure. However, what has been shown in the case studies is that it is certainly possible.

Insulation

The first principle of efficient heating/cooling is the reduction of heat losses/gains in the first place. In a temperate climate, space heating is by far the greatest energy demand in buildings, on average accounting for 60% of energy use.

Looking at the case studies, an effective insulation strategy had to be decided for the particular limitations involved. In regards to walls two insulation strategies are available,

one internal insulation and the other external insulation. Both of these strategies have differing challenges in terms of buildability. External insulation poses additional challenges aesthetically, whereas internal insulation poses challenges economically and technically, particularly in relation to interstitial condensation risk. Interstitial condensation issues are analysed in detail in the full report.

Airtightness

Airtightness is difficult to achieve in refurbishment. Two key sticking points discovered were window installation and dealing with existing joists, in particular when insulating internally. The Lena Gardens and Princedale Road projects, the only two to achieve the Passivhaus standard, had existing joists cut back and rested on steels. The steels were insulated at the ends to minimise cold bridging using structural insulating blocks. The advantages of cutting joist back include minimising cold bridging through joists, easier construction of insulating layer, much less complicated fixing of the airtightness layer, and removal of interstitial condensation risk. Leaving joists in wall pockets typically resulted in weak points in the airtightness layer, and were said to be difficult to seal.

What has been shown through looking at these experimental projects is that achieving exceptionally low energy demand in existing building is possible with the application of Passivhaus techniques, which are based not upon idealisations but on physics.

Opposite, left. Shakirat Owolabi-Dada. Opposite, right: a bottle wall as studied in Shakirat Owolabi-Dada's entry. (Photo courtesy of www.micealiling.com). Right: Daniel Bates and Joanne Hopper receive their Awards.

Highly Commended

Joanne Hopper

Cardiff Metropolitan University

Evaluating the Installation of Retrofitted External Wall Insulation

The paper is based on part of a final report, to complete the MPhil stage of an academic research project at Cardiff Metropolitan University (CMU). The research project was developed to assess the effectiveness of retrofitted energy efficiency improvement measures at dwellings in Swansea. The improvement measures were funded by the Welsh Government's 'Arbed' scheme and implemented by two housing associations.

The requirement for monitoring and evaluation formed part of the funding criteria. The housing associations and CMU saw an





opportunity to develop and undertake valuable research in the increasingly important field of domestic retrofit.

The purpose of the paper was to illustrate some of the key findings from the evaluation of the installation of retrofitted external wall insulation (EWI), as this was the main intervention employed by both the housing associations. The EWI was installed at some of the most deprived dwellings with the lowest energy efficiency ratings in Wales. The dwellings are all classified as hard-to-treat due to their solid exterior wall construction and were built before 1919. In addition, the households were classified as being in fuel poverty.

The evaluation started with a literature review, which identified the importance of upgrading the thermal performance of solid exterior walls. It has been identified that when retrofitting EWI, thermal bridging can undermine the overall performance and potentially introduce internal condensation, which can lead to damp and mould and pose a health risk. Thus, the focus of the evaluation is thermal bridging through the EWI.

In order to assess the occurrence of thermal bridging, data collection involved dialogue with the housing associations to gain a better understanding of how the EWI was implemented; field observations using photography and the reproduction of technical details that were implemented on site; and thermographic surveys to assess reductions in heat loss and identify the locations of potential thermal bridging.

The key findings indicate that potential thermal bridging has occurred due to a lack of preliminary surveys and appropriate technical details at the design stage of the retrofit process, and poor execution on site. From these findings, it can be concluded that the production of observed technical details has provided a valuable link between photo-



graphic and thermographic data for assessing the methods and quality of installation of the retrofitted EWI. To identify if the thermal bridging does introduce internal condensation, the paper recommends that further research is undertaken, which includes longitudinal monitoring of moisture levels on the internal surfaces within the dwellings.

Highly Commended Shakirat Owolabi-Dada University of Central Lancashire

Waste to Shelter: Case Study of Plastic Bottle as Wall Element in Building Construction

American researcher James A. McCain identified rural urban migration as the main factor responsible for urban growth. It has been estimated that at least 16 million housing units will have to be provided to address the shortage in urban shelter in Nigeria, since the number of people entering cities far outstrip the rate at which affordable housing is being constructed. Some 70 per cent (56 million) of the country's urban population lives in crude housing and slums. Most modern buildings in the third world have high use of glass, steel and concrete. The ever-increasing cost of materials is avoidable with the use of recycled alternatives.

Plastic bottles constitute a high percentage of waste generated globally. In Nigeria, plastic waste litters the streets in both urban and rural areas. The use of waste plastic bottles will ease the housing shortage while also sanitising the environment and reducing the carbon footprint.

This special study aims to aid the provision of cheap and affordable housing in developing countries, by examining the viability of waste

plastic bottles as an alternative building material. The study focuses on the use of waste plastic bottles as a wall element in building construction. Using a composite building material (plastic bottle filled with fine/coarse sand and water) the study shows how the combination was subjected to a compression test of 100kg to determine strength capability.

The results showed that bottles (Coca Cola plant type) filled with coarse sand have the highest compression strength, of 1.149 N/mm², which is similar to exfoliated vermiculite, expanded perlite and aerated concrete (air-cured). The study shows that although the composite building material can sustain its weight and a degree of load before failing, the bottles cannot be used solely as a major structural element.

Several case studies are examined, including the 'Plastic Bottle School' in San Pablo, Philippines, constructed from 9000 bottles with iron bar reinforcement between each course and an adobe covering. This was built by Pepsi, partnered with the My Shelter foundation. The study concludes by stating the need for further research and development to expand the range of uses for plastic bottles in construction.



The ever increasing cost of materials is avoidable with the use of recycled alternatives'

Gold Awards

The Gold Award recognises Chartered Members who have demonstrated an outstanding service or commitment to the Institute, industry or Region/Centre. The citations are as follows:

Dave Adams MCIAT For dedicated service to the Central Region

Dave has become, over a long period, one of the Region's most reliable and hardworking members.

He has taken on the roles of Regional Councilor, Secretary and Treasurer, always reporting to the Committee in detail and with enthusiasm. Dave has also always been the first to step in when a Committee post has become vacant and has often held more than one position.

It is worth mentioning the huge support Dave gave to the late Sean Walsh MCIAT. Dave was a major source of encouragement and practical support in the run-up to Sean's achievement of Chartered Membership and would visit him on an individual basis to offer morale-boosting support as well as discuss the Institute and career matters. Sean was always indebted to Dave for this.

Dave has also given long service on the Projects Taskforce, since its inception in 2003, and as such has been very involved in judging the Awards. Dave would be extremely hard to replace in Central Region and they are grateful for his consistent support.

Karl Grace MCIAT For dedicated service to the Institute

The words dedicated, committed and passionate are words that are often over-used when it comes to citations like this, but for Karl Grace, these three descriptors optimise the true essence of his work and attitude.

For over a decade, Karl gave his time and huge energy to the role of Honorary Secretary and contributed tirelessly to maintain the Institute's ethos and forward thinking approach. Combining this demanding role with running his own practice is something to be admired and Karl has become a highly respected senior member of CIAT.

Karl brings good humour, common sense and thought to any meeting and creates an environment which allows for positive discussion and inclusiveness. His work on the Conduct Committee has been immense, dealing with cases and issues in a fair and sensitive manner which called upon his skills and considerable experience as a respected and valued Chartered Architectural Technologist. Karl has become a key member of the Documents Taskforce, and

his input into this group is always valuable. His ability to focus on professionalism, clarity, public awareness and relevance to the membership has been of immense value. The West Midlands Region also owe a huge debt to Karl's commitment, contribution and time. The personality, drive and contribution which Karl brings to the Institute makes him a worthy recipient of this Award in that we can recognise his unique and fine service to the Institute that he is so passionate about. The discipline could know no finer Chartered Architectural Technologist than Karl Grace.

Below: Karl Grace (left) and Dave Adams receive their Awards.



Centre of Excellence / Accreditation



Andrew Claiborne (left) and Richard Longstaff MCIAT from Anglia Ruskin with Frances Robertson from Sheffield Hallam University.

The Institute has awarded its first 'Centre of Excellence' status to Sheffield Hallam University for its commitment to the academic discipline of Architectural Technology and the professional development of Chartered Architectural Technologists. The university was able to demonstrate a well resourced learning environment, staff, links with industry and CIAT and promotion of the Institute and the discipline of Architectural Technology both nationally and internationally.

Professor Sam Allwinkle PPBIAT MCIAT, Chairman of the Accreditation Board, said 'I am very pleased to see Sheffield

Hallam University become our first Centre of Excellence and look forward to our continuing partnership in creating Architectural Technologists of the future.'

Sheffield Hallam University has also received reaccreditation this year alongside Anglia Ruskin University and University of the West of England, Bristol for their Architectural Technology Honours degree programmes.

In addition, the Institute has awarded Accreditation in Principle to the Institute of Technology Carlow for its BSc (Hons) in Architectural Technology. This is the second Architectural Technology Honours degree Accredited by CIAT in the Republic of Ireland.

Belfast 2012

Northern Ireland Region hosted this year's AGM and President's Annual Dinner Dance in Belfast. The events marked the high point of CIAT's year and included the presentations of the Awards highlighted in this issue. By **Adam Endacott**, Public Relations Director.

Members' night

Entitled 'A Night to Remember', members were treated to a night with a Titanic theme as they took a guided tour of Belfast's City Hall, which originally opened its doors in 1906 and was designed by architect Sir Alfred Brumwell Thomas. After the tour, a civic reception was hosted by the Sherrif of Belfast, Alderman May Campbell, who greeted members to the city and then saw them off back to the Europa Hotel for a quiz based on the Titanic and a supper of Irish stew.

AGM

The Penthouse Suite of the Europa Hotel was the venue for this year's AGM with representatives from every Region and Centre. With no resolutions, the proceedings were short and included the announcements of all the Institute's Awards (see full reports in this issue). The formal business was followed by a follow up presentation by Professor Sam Allwinkle PPBIAT on 'Membership Futures' and all delegates were updated on the project that was originally presented to them last year. Whilst the AGM took place, partners enjoyed a tour of Belfast from a Routemaster bus.

President's Dinner Dance

Continuing the Titanic theme, the President's Dinner Dance took place in the Titanic Suite in the magnificent newly built Titanic Belfast building. With the whole of the top floor, guests dined to smoked salmon, beef and lemon tart. Presentations were made to all the Award winners and a gift of thanks was presented to Barry and Daphne Le Beuvant. Dame Mary Peters DBE LL gave the Loyal Toast and Sammy Wilson MP MLA, Minister of Finance and Personnel gave a welcome speech. Dancing was to the Belfast Jazz Orchestra.

From top: NI Regional Chairman Harry Johnston MCIAT (I) and President Colin Orr present the Dinner Dance charity collection to Suzy McIlveen of Marie Curie. The AGM. The Dinner Dance.

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A matter of life and debt

Recovering unpaid fees can be a costly exercise both in time and legal costs if a sensible approach is not adopted from the outset. **Sarah Elderton** of Berryman Lace Mawer LLP looks at how to recover your fees as well as your options if an agreement cannot be reached.

Step 1 – Your Contract/Terms of Appointment

Consideration of how you are going to collect any unpaid fees should start very early in the contract/appointment process and you should ensure that your contract/terms of appointment include an appropriate clause in respect of remuneration and methods of payment, which will put you in the very best position to recover fees should a dispute arise.

Step 2 – Review the Contract/Terms of Appointment

Once it is clear an invoice is overdue for payment you should start by reviewing your contract/appointment to refamiliarise yourself with the options open to you for resolving a fee dispute.

You should make yourself aware of the dispute resolution mechanism set out and review whether there is an adjudication clause to try and resolve the matter without the need for legal proceedings.

If your contract or agreement states that an alternative dispute resolution method should be explored then it is essential that you go down this route prior to issuing proceedings.

It would also be worthwhile checking any collateral warranties or any third party rights that may affect the legal options open to you, if you have any doubt about this you should seek legal advice.

It is extremely important that if there is a contract or agreement in place that the provisions in it are followed as simply refusing to continue working on the project may put you at risk of a repudiatory breach and a counter claim from the party you are attempting to recover your fee from. It should be noted that members entering into arrangements without written agreements in place do so in contravention to the Institute's Code of Conduct.

Step 3 – Contact the client

You should start by calling/writing to the your client or the relevant accounts department to ensure that your invoice has been received

and to ascertain whether any issues have been raised with regards to paying it.

It is important to remember that at any time but particularly in the current climate it is crucial to retain business relationships and by not following an invoice up with a call/letter prior to commencing any formal proceedings, embarrassment may result if it was simply the case that your client did not receive your invoice in the first place.

It can also be the case that issuing proceedings against a client can in turn instigate a negligence claim against you whereby your client alleges that the level of service you provided was not to the standard they had expected. In addition to this, they may also make a complaint to your professional body in terms of your professional conduct.

This may be an unfounded allegation to allow themselves more time to pay the bill but only results in you having to notify insurers and spend the time fully investigating matters. A negligence claim against you is not only costly but also time consuming to your practice and can lead to significant costs being incurred in having to defend such an action either in court or any complaint to your professional body.



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It would be beneficial during your negotiations if you can refer to the contract or agreement that is in place that entitles you to the monies that you are claiming and the time by which these are to be paid. It is therefore crucial that you try to resolve matters amicably in line with your contract or agreement. You may need to consider reducing your bill slightly to bring an end to the matter.

In summary:

Contact your client by phone or in writing to ensure the invoice has been received.

Keep a record of all contacts made.

Step 4 – Formal letter requesting payment

If your attempts to resolve matters following the procedures in your contract or agreements are being ignored then send a formal letter to your client advising that legal proceedings will be considered within 14 days if payment of your invoice is not paid. It is sometimes the case that your client chooses not to pay their invoices until they receive a formal letter setting out an intention to issue proceedings.

Step 5 – Background checks

If no response is received you should consider carrying out some background checks to ensure that the client is solvent and has the means to pay the monies owed to you.

In the case of individuals you should check whether they own any property, whether they have any outstanding County Court Judgments (CCJs), whether they have a job or any other assets that you can attach your judgment to and recover your monies.

If your client is an individual and you know where they live, you could obtain some office copy entries from the Land Registry to see if they own their house, and whether it is mortgaged. If the client is a company, obtain a company search from Companies House and have a look at any filed accounts. They are agencies who will carry out credit searches against both individuals and companies for a small fee and this information will be vital in your decision as to whether the debt is worth pursuing.

There is clearly no point in incurring unnecessary court fees in obtaining a judgment against a company or individual if the debtor doesn't have the means to repay the monies owed to you.

In cases where the project is overseas then you will need to have checked whether a judgment obtained within the jurisdiction of England and Wales can be enforced and what additional costs will be incurred in doing so. It should be remembered that Scotland and Northern Ireland are considered 'overseas' for these purposes.

Finally, you should also assess the amount of money owing to you as in issuing proceedings you are going to incur a court fee as well as potential legal costs and enforcement costs which may outweigh the monies you are trying to obtain.

Step 6 – Letter before Action

If you are satisfied that this is a matter you are happy to proceed to court with, then a Letter before Action should be sent setting out that legal proceedings will be issued in the event that no response is received within the next seven days.

The Letter before Action should set out the amount of money owed to prevent matters going to court and some detail as to why this matter is proceeding to court.

Step 7 - Issuing Proceedings:

The court now has a 'Money Claim online' service which allows claims of up to £100,000 (including interest) to be brought online, so long as the claim is not against any more than two people.

This service has been set up to assist individuals and companies in pursuing claims without the need to instruct solicitors and is really designed for the more straightforward of claims.

It is important that all court procedures and protocols are followed to ensure that even if you are ultimately successful in obtaining a judgment for the monies owed, you are not left in a position whereby you cannot recover your costs of pursuing this action from the other party.

You can of course still instruct solicitors to obtain a judgment against a company or individual and remove the risk of missing or failing to comply with court procedures.



Litigation should only be entered into as a very last resort'

As has been mentioned earlier in this article, there is nothing stopping the client with the outstanding debt defending the claim and deciding to instigate a claim of negligence or breach of contract against you at this point of the process. If no defence is received within the prescribed timescale it is open to you to enter judgment.

Step 8 – a judgment but no payment

Firstly, send a copy of the judgment you have obtained to the client with the outstanding debt and request that payment is made within the next seven days, failing which you will commence enforcement action against them.

If no response is received then there are a number of typical enforcement options (detailed below) open to you at this stage and so long as you have carried out the necessary checks as detailed in stage 3 it will be apparent what your best or perhaps only option is at this stage.

a) Instructing County Court Bailiffs:

You can send County Court bailiffs round to the address of the debtor and they will then remove items up to the value of the judgment amount. The bailiffs' fees and the costs of pursuing this form of enforcement are usually added to the judgment debt.

b) Attachment of Earnings:

For larger sums of money the debtor may not be in a position to repay such a large lump sum

up front and an attachment of earnings may be the best option.

A court fee (currently £100.00) is paid to court who will then seek details of the debtor's financial situation and in the event that the individual does not respond, their employer will be asked to provide details of their earnings.

The court will then make an order against them to make either monthly or weekly payments that the court deem as being reasonable taking into account their financial situation.

However, if the debtor earns very little or has a number of other debts then the court may award a weekly or monthly repayment that will not result in the monies being repaid within their life time.

c) Charging Order:

In the event that an individual or company owns the property that they are in then this option will probably give the greatest protection to your debt as on the sale of the property the monies will be paid to you from the sale proceeds.

However, it is again important that you have checked that there is sufficient equity left in the property and that there are not a number of other charges on the register that will be repaid first.

There is therefore a chance that you have a charge on a property that has insufficient equity to repay your debt.

d) Statutory Demand:

This is a costly process but normally a letter setting out that you intend to commence insolvency proceedings is sufficient to resolve matters.

e) Winding up Proceedings:

This is an application to set a date for a hearing in court to determine whether a company or limited liability partnership (LLP) may be wound up and put into compulsory liquidation.

Conclusion

Recovering unpaid fees by way of litigation should only be entered into as a very last resort and therefore all methods of negotiation should be explored prior to commencing litigation. This should then hopefully prevent damaged working relationships and unnecessary costs being incurred. It is always recommended that you seek legal advice before instigating and legal proceedings. Please remember to keep a record of all contacts made and actions taken.

Institute News

English Heritage recognises Conservationists

Following extensive discussions it has been confirmed by the Chairman of English Heritage, Baroness Andrews, that English Heritage will now recognise CIAT-Accredited Conservationists in the lead professional role in projects funded under its repair grant schemes.

This is excellent news for Chartered Members who wish to become CIAT-Accredited Conservationists. For information on the CIAT-Accredited Conservationists scheme, please visit www.ciat.org.uk.

Professorship for Norman



CIAT is delighted to congratulate its Vice-President Education, Norman Wienand MCIAT on his recent achievement of becoming a Professor of Architectural Technology.

Norman, who is Head of the Department of Architecture and Planning at Sheffield Hallam University, was awarded the professorship for his contribution to the development of teaching and learning of Architectural Technology as a field of study. In addition, it recognises

Norman's contribution to the progression of the Architectural Technology profession through academic influence and impact.

Norman said 'In joining a very small and select group of Professors of Architectural Technology I hope that I can continue to build the esteem of the discipline and help it to reach the acclaim it deserves.'

Student wins publishing deal

CIAT member Daniel Bates, who was Highly Commended for his dissertation *Passivhaus Refurbishment* in the 2012 Student Award for Technical Excellence in Architectural Technology (Technical Project) has had the work published by LAP Lambert Academic Publishing. The book, which focuses on practical difficulties and cost-effective solutions found in Passivhaus refurbishment projects in the UK, can be purchased online.

LABC Warranty

Members are reminded that CIAT Insurance Services (in partnership with LABC Warranty) offers a range of comprehensive home warranty insurance products to the Chartered Members of CIAT involved in the design and development of both new build and conversion projects.

McParland Finn Ltd who run CIAT Insurance Services, with the approval of the FSA, has a contractual agreement with CIAT that allows the Chartered Members to act in an introductory capacity in respect of the LABC range of Warranty products.

For more information on this scheme please contact CIAT Insurance Services on 0161 236 2532 or visit www.ciat-insurance.co.uk/warranty.

Conduct

011571/F2870 (profile candidate) – Mr R Bell

Mr Bell was found in breach of Clause 6a) from the Code of Conduct effective 1 May 2010:

Clause 6: Providing Services Directly to a Client
Chartered Members and profile candidates acting as principals of a practice shall:

a) before commencing work on any commission, endeavour to ensure that their terms of engagement have been given in writing to the client.

Disciplinary action:

In accordance with the Conduct and Disciplinary Procedures Schedule 1, Item 17 (b), Mr Bell was reprimanded in respect of this breach and was required to give an undertaking in writing to refrain from further contraventions of the Institute's Code of Conduct; this he has duly done.



Cake decoration: Chief Executive Francesca Berriman received her MBE from HM the Queen on 16 November. To mark the occasion, the Institute presented Francesca with a commemorative cake made by Tanya Ross of Novel-T Cakes of Moate, Co. Westmeath.

Do we have your current email address?

As more and more Institute communications are sent electronically, it is important that we have your correct email address. If we do not have your address, or if you are unsure, please email info@ciat.org.uk with your up-to-date details.

An up-to-date address ensures you receive the latest information such as the *Weekly Bulletin* and Regional alerts (which contain information not published in *AT* magazine) and will enable you to log in to the members' area of the CIAT website.

Membership News

The next generation: Student Group

The Membership, Education and Public Relations Departments were pleased to attend the re-formed Student Group meeting at Westminster University in September, with students present from most of the Accredited universities. The aims of the group are:

- To raise awareness of CIAT and the discipline of Architectural Technology
- To promote the benefits of progressing to Associate membership and assist with the recruitment of new student members
- To provide a forum for younger professionals and students
- To provide a communication route for student members to the Institute's Executive Board and Council

To find out more please email membership@ciat.org.uk

Introduce a member scheme

The Institute is continuing its successful incentive scheme for 2012. Introduce a friend or colleague to join the Institute and you will be rewarded for it with £40 (€46). If you introduce more than one person we will pay £40 (€46) for each. Terms and conditions can be found at: www.ciat.org.uk/en/Join_CIAT/Introduce_a_member.cfm

Group Membership Scheme (GMS)

Any practice or organisation with three or more applicants applying for any grade of membership (excluding student) can apply to become part of the Group Membership Scheme. Main benefits include:

- waived application fee (£60)
- 50% first year reduction in Associate or profile membership subscription
- if five or more Professional and Occupational Performance (POP) Records are ready at the same time, there is a saving of 25% for each candidate on the £125 POP Panel assessment fee
- if five or more candidates are ready for their Professional Practice Interview at the same time, the interviews may be arranged at your work place with a saving of 25% for each candidate on the £175 Professional Practice Interview fee.

Terms and conditions can be found at: www.ciat.org.uk/en/Join_CIAT/Group_Membership_Scheme/

New Members

We are delighted to congratulate the following individuals on obtaining Chartered Membership, MCIAT.

014078 Kris Baxter, Lincs. (Region 04)
016011 Adam Chandler, Pembs. (Region 16)
018710 James Clague, Kent (Region 10)

016483 James Conway-Morrison, Warks. (Region 05)
018843 Chris Curtis, India (Region 00)
018464 Simon Gallagher, Hong Kong (Centre 01)
024174 Guy Gibson, Devon (Region 12)
022149 Chris Jubb, S.Yorks. (Region 02)
017500 Neil Kee, Hong Kong (Centre 01)
019806 Sophia Kee, Hong Kong (Centre 01)
019656 James Lai, Herts. (Region 08)
017422 Mel McGerr, Co. Westmeath (Centre 02)
009761 Rob Mellor, Staffs. (Region 05)
009200 Paul Onslow, Hong Kong (Centre 01)
019330 David Roe, S.Yorks. (Region 02)
019308 Jamie Roobottom, Conwy (Region 16)
021107 Peter Russell, Warks. (Region 05)
018016 Rachel Satterthwaite, Cumbria (Region 01)
016955 Corryn Schmidt, Hong Kong (Centre 01)
022291 James Shaw, Derbyshire (Region 04)

Congratulations to the following individuals on obtaining Architectural Technician membership, TCIAT.

026691 Jose Antinolo Perez, Ibiza (Region 00)
025105 Ross McArthur, London (Region 09)

CIAT ties

Institute ties are now available in pure silk with CIAT logo. Cost £15.00 inc postage and packing. To order please visit the online shop at www.ciat.org.uk

In memoriam

We regret to announce the deaths of the following members:

Ronald Littleboy MCIAT, West Sussex (Region 10)
Ivor Mitchell, MCIAT, County Armagh (Region 15)

Region and Centre News

East Midlands Region 04

A CIAT promotion event will be held at the University of Derby in Spring 2013 – watch this space!

The Committee would like to create a permanent student role to encourage links with academia. Student member Luke Dallison is helping encourage greater attendance at meetings by students to facilitate this. It is hoped this will help achieve the following:

1. The connection between practice, institute and education is strengthened.
2. New ideas, free from mindsets generally directed towards compliance, are available.
3. Pro-active, next generation committee members are welcomed into the institute at a decision-making level.

4. CPD organisation can be distributed among more people, also giving students a responsible, accountable role.

5. Further study, Masters/Doctoral research topics can be encouraged, discussed and mentored outside of the academic setting.

6. POP record monitoring for students is more integrated, with conversion to TCIAT and MCIAT supported by more people than a single mentor.

West Midlands Region 05

The following events have been organised by the Regional Committee – individual notices will be sent out on each event nearer the time.

29 January. Architectural precast solutions. Design possibilities of architectural precast

concrete cladding; finishes available; colours and textures; innovations including ultra-high-strength concrete; translucent concrete; geotextile formed concrete.

26 March. Utilisation of thermal mass. Explanation of principles and design techniques; future use in rising temperatures; passive solar design; embodied and in-use CO₂ emissions; case studies.

Northern Ireland Region 15

The Region recently hosted a CPD seminar on the upcoming changes to the NI Building Regulations. The speakers were Mike Christie, Senior Building Control Officer, Belfast Council, and Danny Kearney, Xtratherm Group Technical Manager.

(Continued overleaf)



Above: Andrew Corkhill ACIAT (left) and Eddie Weir ACIAT of Northern Ireland Region (15) on the CIAT stand at the Improve Your Home Show, Belfast.

Republic of Ireland Centre 02

Building Regulations. The revised TGD Structure 2012 is available to download from the Department of the Environment, Community and Local Government's website, or in hard copy from Government Publications.

Pyrite. The report of the Pyrite Panel, June 2012, has been published and contains 24 recommendations to the Minister for the Environment to prevent the Pyrite problem occurring in the future. It is available to download from the Department's website at www.environ.ie.

Building Control (Amendment) Regulations 2012. It is understood that, following representations to the Minister, the draft Regulations were not signed for implementation on 1 October as intended, and a draft Code of Practice for Inspection and Certification may be published for public consultation

to industry stakeholders later in the year. Members will be kept informed by email of all relevant developments.

Technical Committee. The Centre is keen to recruit members to its Technical Committee. This meets monthly in Dublin to review proposed legislation and regulations, to prepare public consultation submissions and to prepare copy for publication in *AT*.

For more information please contact Denise Germaine, Chairman.
Email: denisegerm@gmail.com.

For the latest Regional news check CIAT's *Weekly Bulletin*.

If you do not receive it, please email info@ciat.org.uk

PUBLICATIONS

Detail in Contemporary Concrete Architecture



This book's introduction starts a brief history of where concrete originated and how advances in technology throughout the years have allowed further development and design

boundaries to be explored. Interestingly concrete dates from the Roman period (as seen in the Pantheon) and was principally developed to overcome spanning distances. Whilst today's concrete is obviously different in nature it was still interesting to read how the material has evolved through the centuries.

The structure of the book has been carefully thought out; it identifies 49 separate projects including cultural buildings, residential buildings, commercial and public buildings and finally, educational buildings. Within each of the projects there is a brief written summary of the building whilst also identifying who the client and project team were, followed up by photo-

graphs and more interestingly for Architectural Technology professionals, the technical drawings! The drawings are shown in plan; section and elevation format (similar in style to planning stage drawings) and in some projects even finer construction details. The drawings are scaled conventionally (1:100, 1:200, and where details are shown 1:1, 1:5 and 1:10) which is great to see in a book.

The projects are taken from all around the world and their ages vary, but there is a good share of projects from the United Kingdom. Whilst I for one am always wary of generic drawings produced by manufacturers, (in terms of checking for cold bridging, waterproofing, fire spread and thermal etc) I inevitably adapt a detail or use it as a start point to suit the project. The details shown in the book (particularly the older projects and the ones not within the UK) are clearly not going to meet the current Approved Documents, however for design flair and ideas the drawings are very useful.

The biggest advantage to this book is 'the bonus disc' that accompanies the book. The CD contains all of the drawings illustrated within

the book in DWG and EPS formats allowing you to use them within CAD based software. This would be particularly useful for students who can then modify and adapt the drawings to suit their design projects (with of course making reference to the author!), as well as Architectural Technology professionals who like the concept of a particular building and would like to expand on the design further. The drawings are illustrated similarly to those you would find in *AJ* magazine. The drawings' layers are locked and set to a default layer and you will need to adjust the scale before being able to adapt or use.

In summary, this book and CD is a very useful tool for design ideas and the buildings will be of particular use for university students looking for interesting and exciting precedent studies. Whilst the text is informative it is minimal – it is the photographs and drawings that best explain the buildings.

Review by Michael Greve MCIAT
www.g3architecture.co.uk

By David Phillips and Megumi Yamashita. ISBN 978 1 78067 0096. RRP £35.00. Laurence King Publishing (www.laurenceking.com)

Building the BIM campfire

The Construction Industry Council (CIC) ran a series of BIM Focus events around the UK in order to demystify what will soon be the industry's major meeting point. **Scott Eburne**, Architectural Technology student at Nottingham Trent University, sent this report.

Building Information Modelling, or BIM as it is commonly known, is slowly preaching its philosophies and processes to the whole of the UK through the BIM Focus Events in every region. In October I attended the Coventry event at the ACT-UK Simulation Centre, part of Coventry University Technology Centre. The event attracted numerous individuals from across the board; academia, product manufacturers, Chartered Architectural Technologists, architects, contractors, surveyors, all looking at the ways in which BIM will influence their work in the years to come.

It became clear that many present on the day were unsure of what BIM is, and exactly how it will affect our industry, including myself, and thus it was refreshing to hear upfront talks on how it relates to us as the user. Within five minutes of the first presentation from Steve Race, the BIM Regions' Ambassador, it struck me that BIM will soon become the substance that we live and breathe. It will become our bread and butter, but for me most importantly, it will scope my future career path and how I design buildings throughout my life.

What is BIM some of you may ask? Well, BIM covers a diverse range of principles, yet Steve pointed out the things which it is not. BIM is not just 3D design, or a new technology application, it is much more than that. BIM is a process, a way of sharing and managing information better, to aid the construction process in becoming more efficient on a corporate level. Four key words were projected onto the presentation board to define BIM, 'open sharable asset information', perhaps the most simple and precise way in which to depict what BIM actually is.

Jaimie Johnston, a Core Team Member of the BIM Task Group, gave a detailed analysis of the Government's 'BIM Strategy', how they intend to gain consistent industry data and to help train the supply chain. Jaimie gave the apt metaphor of BIM being the campfire, with everyone gathering round it in order to work together. This works well as an image when trying to portray how BIM will function for us all.

Gary Ross, Director of BIM Innovation at Capita Symonds, discussed the practical use of BIM within his own work and how he has helped to ensure that all necessary parties are fully trained. Gary's key recommendation for

BIM is the 'campfire' with everyone gathering around it in order to work together.



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those companies that are new to BIM, starting off on a test project, something you have done before or similar will help create fewer issues within the process. This will make the progression of BIM easier to understand and minimal mistakes will occur in the construction process.

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Perhaps BIM can be our renaissance. We are the pioneers of this era, and the most valuable of assets to clients'

For many at the event, the presentations helped demystify the different conceptions of BIM that were held. Those delegates went away with the understanding that BIM can be used for any project, no matter how big or

small. The question and answer session provided an in-depth response to all the queries delegates had, helping to provide a real summary of the day's events and how to move forward with BIM.

The day's events were held in the ACT-UK building, a facility which has moved forward the boundaries of the industry by providing capabilities to see a scheme being built before its construction. This allows contractors and designers alike to see any faults within the process and more importantly, for the client to interface with the proposed building, to make sure they get exactly what they require. Seeing the facilities first hand gave a real insight into how these technologies could revolutionise our field in the future.

The benefits of BIM to our industry are grand, with the potential to increase expansion and profit more than ever before. Perhaps BIM can be our renaissance. If it is, then we as Architectural Technology professionals should look to be at the forefront, not only with the use in design, but as potential BIM Managers for schemes. The skills which AT professionals possess and have honed are a match made in heaven for BIM. Hopefully before 2016 we can show others in the industry that we are the pioneers of this era, and that we are the most valuable of assets to clients.



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