



CIBSE **JOURNAL**

#Build2Perform

August 2019

www.cibsejournal.com

NATIONAL HEALTH SAVINGS

**Fixing the issues of overheating and
energy inefficiency in NHS buildings**

**SPANISH CITY PLEASURE
PALACE REVIVAL**

**BUROHAPPOLD SHARES
AWARDS SUCCESS**

**USING BLOCKCHAIN IN
HEAT NETWORKS**

ANNUAL GENERAL MEETING

The Annual General Meeting of the CIBSE was held at the Royal Society, Carlton House Terrace, London, on 8 May 2018. Peter Y Wong, outgoing president, chaired the meeting. Chief executive Stephen Matthews read the notice convening the meeting.

The minutes of the 40th AGM of CIBSE held on 9 May 2017, and published in the July 2017 *CIBSE Journal*, were accepted as a correct record and signed by the chair.

ANNUAL REPORT AND FINANCIAL STATEMENTS

Peter Y Wong introduced the Annual Report for 2017. He referred to the many locations he had visited during his year of office, both in the UK and abroad, to meet CIBSE members and others on behalf of the Institution. He went on to draw attention to the developments during the year, as set out in the report. He referred, in particular, to the president’s dinner held in October, to which all region, society and group chairs were invited and Institution awards presented, which had been a highlight of the year.

Richard Willis, audit partner at Moore Stephens, read the audit report, which confirmed the Financial Statements gave a true and fair view of the Institution’s affairs, and had been prepared in accordance with all relevant requirements. He drew attention to the revised format of the auditor’s report, and confirmed there were no issues to which he would be required to draw attention under the revised requirements. He further confirmed that there were no undisclosed material issues, and no inconsistencies between the Annual Report and the Financial Statements.

Stuart MacPherson introduced the Financial Statements for the year, noting that income was slightly down on the previous year at £6.9m, relating mostly to CIBSE Services and other subsidiaries. He outlined the breakdown of expenditure, which, at £7.3m, had again been somewhat below the 2016 total, and highlighted in particular the distribution of expenditure among regions, societies and groups.

The overall group result for the year had been a £398K deficit before investment and pension fund movements, with a final overall drop in fund balances of £65K. The reasons for the operational deficit related mostly to IT investment, with well in excess of £1m spent over the past few years to enhance systems.

MacPherson went on to outline the balance sheet, noting that the large creditors figure

related mostly to pre-paid membership subscription income. He went on to highlight the outline financial projections for future years, stating the operational contribution was expected to return to break even in 2018, with surpluses planned from 2019 to allow reserve levels to be rebuilt. He believed the Institution had been right to undertake the investment programme and had used its reserves appropriately in pursuit of its charitable objectives, but that it was also appropriate to rebuild reserve levels over time. It was understood, however, that future results would be dependent on market conditions, particularly in respect of CIBSE Services.

Rowan Crowley, CIBSE Services managing director, was invited to explain upcoming CIBSE Services initiatives. He referred to the uncertain outlook regarding economic conditions, Brexit and the outcome of Dame Judith Hackitt’s review of Building Regulations. However, there were a number of successful activities within CIBSE Services, including training, which it was hoped could expand further. The new Learning Management System would facilitate wider use of online learning through integration with the CRM system, which was now delivering much better information and analytics.

CIBSE Certification continued to have a positive core business, and was now able to offer accreditation of management systems, having achieved ICO9001 certification. There may be further potential for competency schemes, with BIM having performed well and other digital initiatives under consideration. The *CIBSE Journal* continued to be very successful, despite reductions in print advertising, and new opportunities for supplements, directories and other options would continue to be sought. The delivery of knowledge in new formats to meet new expectations remained a challenge for all providers, and the need for the Knowledge Portal to move forward and deliver for the needs of a new generation of engineers was noted.

The Build2Perform Live event had been a major new development with 1,400 delegates attending, and plans were in hand for the current year’s

“Build2Perform Live was a major new development with 1,400 attendees”

Board and Council for 2018/2019

Matthews reported that, in the current year, there had been no more candidates than vacancies and that all candidates had, therefore, been declared elected unopposed. He declared the following individuals elected to serve as officers, board members and council members following the AGM 2018:

Officers:

President:	Stephen Lisk (takes office automatically)
President-elect:	Lynne Jack
Immediate past president:	Peter Y Wong (takes office automatically)
Vice-presidents:	Ashley Bateson Kevin Kelly Stuart MacPherson
Hon treasurer:	Adrian Catchpole

Member of the board:

Elected members:	PL Yuen Susan Hone-Brookes, Kevin Mitchell
-------------------------	---

Members of council:

Elected members:	Colin Ashford, Maria Longo
-------------------------	----------------------------

event. The Building Performance Awards continued to be successful, but greater attendance was sought to expand its profile and reach. The Technical Symposium has performed well, with excellent attendance this year, and it was planned to build on this and to make the presentations more widely available. The Society of Digital Engineering had been launched and would provide an opportunity to take forward many ideas and opportunities in respect of digital engineering.

Questions were invited and the many positive developments were welcomed. It was pointed out, however, that while CIBSE Services had returned to profit, its costs still appeared high. This was agreed; however, it was pointed out that significant staff and overhead costs were apportioned to CIBSE Services, and its activities provided many incentives to potential members to join the Institution. Matthews further explained that CIBSE and CIBSE Services pursued a common agenda and that, while CIBSE Services was an important source of income, the intention was always to achieve that through activities that supported the overall objectives of the Institution.

It was suggested that Digital Engineering might benefit from a change of name. It was noted that this had been considered for some time, but that no better alternative had yet been identified.

AUDITORS

MacPherson proposed that Moore Stephens be appointed as the Institution’s auditors for 2018, and that the board be empowered to agree its remuneration. This was seconded by Adrian Catchpole and approved nem con.

SPECIAL RESOLUTION

MacPherson proposed adoption of the Special Resolution for Membership Subscriptions for 2019 as set out in the Calling Notice. He drew particular attention to the removal of the discount that had previously been offered for direct debit payment as a result of changes to consumer protection regulations. Advice taken indicated that offering a discount for one payment method would, in effect, constitute a prohibited surcharge on other payment methods, and it had therefore been concluded that the discount must be removed. Only 18% of CIBSE members paid by direct debit, and consideration would be given to the scope for an early payment discount in future years. The proposed increases had been limited to 3-3.5%, although it was possible that inflation may be higher. The proposal was seconded by Les Copeland and approved nem con.

ANY OTHER BUSINESS

There was no other business.



Global reform

Following reviews of construction in high-rise residential buildings, the construction sector is facing major change with calls for a significant update of regulations. Hywel Davies reports

In response to the outcry over failings in tall buildings, government is set to introduce a Building Commissioner with responsibility for auditing workers in the industry. There will be greater protection for homeowners and owners' organisations, to help them obtain compensation if builders or engineers have been negligent. The response has been described as the 'biggest shake-up in building and construction laws in our... history.'

An independent report found that the 'nature and extent of the problems [in the industry] are significant and concerning', and 'likely to undermine public trust in the health and safety of buildings if they are not addressed in a comprehensive manner'.

It calls for registration schemes for builders, surveyors, architects, engineers, designers, and building inspectors – and new mechanisms for training and licensing. The government proposals are intended to ensure that 'people who work in the building and construction industry' will have 'to take responsibility for their work.'

The proposals are likely to mean 'requiring designers to sign off on their designs, and builders to build their buildings in line with those designs.' The proposed commissioner would have responsibility for enforcing the licensing scheme.

Other measures will give builders less control over the certifiers responsible for approving their work, and a bond defects scheme will make it easier for homeowners to remedy defective work.

The proposals are part of the state government of New South Wales' response to a major review commissioned in August 2017 – and published in April 2018 – by the Building Ministers' Forum, a collective of Australian state and territory ministers. Its report was the culmination of six months' investigation by the chancellor of Western Sydney University, Peter Shergold, and lawyer Bronwyn Weir, who has many years' experience of building regulations. Further responses will be delivered across Australia in the coming weeks.

The report was commissioned in reaction to a series of problems with tall residential buildings in Australia, including a fire in the Lacrosse Building in Melbourne. Since it was published, there have been highly publicised structural failures in the 36-storey Opal Tower, at Sydney



"Issues facing engineers and their associations across the world are very similar"

Olympic Park. Significant cracks that developed in December 2018 have been attributed to design and construction failures. In early February, there was another high-rise fire in Melbourne, in a block of flats in Spencer Street.

Six days later, NSW fair trading minister Matt Kean released his response to the Shergold Weir report into compliance and enforcement in the Australian building industry. 'When you buy a property in NSW, you have every right to expect that [it] is safe, structurally sound, and free from major defects. And, unfortunately, that is not always the case,' said Kean.

He announced the state government would accept the 'vast majority' of the 24 recommendations in the Shergold Weir report, published just three weeks before *Building a Safer Future*, Dame Judith Hackitt's review of building regulations and fire safety in England.

The two reports review building regulations in their respective countries and recommend reform. They are quite different, reflecting their respective terms of reference and context, and considerable

differences between building regulations in the eight Australian jurisdictions and in England. However, the reports' observations on building practices, culture and regulatory oversight are remarkably similar, and there is scope to learn from each other. Similarities include:



Support for performance/outcomes-based building standards. Both reports conclude that standards for building construction must allow innovation and use of new and emerging products and building methods. They also acknowledge that a performance- or outcomes-based model requires high levels of competency and transparency, which are lacking in current practices.

Architects and designers should be obliged to produce designs that show a proposed building will meet required safety standards. They should supply full evidence that relevant safety considerations have been addressed and managed, and that the building will comply with all relevant legislative requirements.

The role of building surveyors or control officers in both jurisdictions, and the need to avoid conflicts of interest and clients choosing their enforcement officials. Australia has four models across its eight jurisdictions but, where owners or builders can engage a private surveyor or local government to issue approvals, the process to be followed is essentially the same. There are similarities between Dame Judith's model and those in Western Australia, South Australia and, to some extent, Tasmania.

Greater control over changes to approved designs. In particular, over changes to design in 'design and construction' models and during 'value engineering', with tighter control and full records of changes, which need to be enforced effectively. Linked to this is the need for:

Record keeping using digital records, to deliver and maintain key building design and safety information using new and emerging technologies (such as BIM) to give owners and safety managers access to all relevant information for the life of the building.

Competency of building practitioners, with both reports recommending improved competency of key practitioners so that performance/outcomes-based design and construction is delivered by those who demonstrate and evidence adequate qualifications and skills. The Shergold Weir report recommends a harmonised registration scheme for all eight Australian jurisdictions and compulsory professional development.

Comprehensive regulatory enforcement powers supported by meaningful penalties, to reward a compliance-based culture, with high-level coordination of relevant regulators – the 'joint competent authority' in Dame Judith's scheme.

Both reports also address the role of fire authorities, maintenance of fire-safety systems during occupation, and building product safety and quality assurance.

The issues facing governments across the world, as well as professional engineers, are very similar as they strive to rebuild trust and confidence in their building and construction sectors. CIBSE is a global engineering body with members in the UK and Australia, so there is plenty of scope to work together to respond to the challenges our sector faces. While the exact destination may vary from state to state, the direction of travel is clear: regulatory change is coming, and we need to embrace it.



Shaping a low carbon future, together

Work by the government on Building Regulations and the future of heat offers many opportunities to be involved with CIBSE activities, says the Institution's Julie Godefroy

In the past 10 years, the UK has achieved significant carbon savings through the decarbonisation of the electricity grid. Decarbonising heat is now acknowledged as one of the biggest challenges if the UK is to continue on its trajectory and meet its carbon-reduction targets.

The Department for Business, Energy and Industrial Strategy (BEIS) is exploring how this may happen, and has published its analysis of technology and policy options.

Much aligns with recommendations by CIBSE and others: there is currently no clear, single contender to replace the wide coverage and convenience of gas heating, and a low carbon heating future is likely to require a mix of options. These include electric heating (with a large role for heat pumps); hydrogen, whether used in fuel cells or for decarbonising the gas grid; and heat networks, particularly in dense and mixed-use areas, where they can take advantage of alternative fuel sources and heat rejection from cooling systems, the Tube or other processes.

BEIS also seems to have acknowledged that the market alone cannot deliver such substantial changes, capital investments



"Buildings that are not connected to the gas grid are likely to be the early test beds of future low carbon heat options"

and infrastructure upgrades, while still keeping energy affordable and protecting consumers: a mix of policy requirements and incentives will be required. The department also stresses the importance of increasing consumer awareness. While this is true, there are probably other key drivers that have more of an influence on the heating choices made by consumers. These include convenience, affordability, advice from suppliers and overcoming the caution of installers towards new products. New regulations will be needed to provide the catalyst.

Buildings that are not connected to the gas grid are likely to be the early test beds of future low carbon heat options – an approach CIBSE has long advocated.

The Institution will continue to develop guidance in this area, in particular for future heat networks (4th and 5th generation and ambient loops), electric heating, and demand management. Get in touch if you are interested in taking part.

Beyond questions of how to meet demand, CIBSE has repeatedly stressed that we must consider energy efficiency, both to deliver carbon savings and to increase the feasibility of low-carbon

supply options. Simply put, without demand reduction it is unlikely we will have enough capacity to supply heat entirely from low carbon sources, particularly when huge increases in electricity demand are expected in the transport sector from electric vehicles.

Collaboration on Building Regulations – CIBSE and the UK Green Building Council

After our detailed position paper on recommendations for changes to Building Regulations Part L and F, CIBSE has worked with the UK Green Building Council to produce a common summary statement. The aim of this is to send a consistent message to government and influence the upcoming review of these parts of the Building Regulations. Key elements include:

- Establishing a clear trajectory to 'zero carbon', so the industry can start adopting stretching targets and developing cost-effective solutions
 - Exploring how to gradually introduce requirements on operational energy and carbon, rather than design and as-built requirements alone. As a very first step, this should start with gathering data on operational performance
 - Better addressing indoor air quality and overheating.
- Both papers can be found at bit.ly/CJMar19pos

Environmental regulations

CIBSE has responded to consultations on environmental regulations – an area likely to be most affected by Brexit:

- Department for Environment, Food and Rural Affairs consultation on monitoring of environmental indicators: we broadly support this, and have advocated a more robust framework, including a better culture of assessing policy effectiveness, and reporting against science-based objectives (for example World Health Organization air quality guidelines), not just against the government's own targets
- Parliamentary inquiry on the Environment Bill, which sets the framework for environmental regulations and enforcement post-Brexit: we support a number of proposals; however, we also have serious concerns, including the independence of the future body that will hold government to account.

Current consultations:

- Air pollution control programme: respond to CIBSE by 4 March
 - We are working with the Royal Academy of Engineering to inform the UK's post-Brexit immigration strategy. Let us know if you would like to inform our work – for example, if you have assessed how skills and/or salary criteria may affect your business.
- All can be found at cibse.org/news-and-policy/consultations



JULIE GODEFROY
is technical manager
at CIBSE



Worth Another Look...
[tamlite.co.uk/
worthanotherlook](https://tamlite.co.uk/worthanotherlook)



CMR

in complete control

CMR Controls manufactures low air pressure and air volume measurement sensors and control systems for standard air conditioning, clean rooms, sterile laboratories, containment facilities, and fume cupboard extract systems.

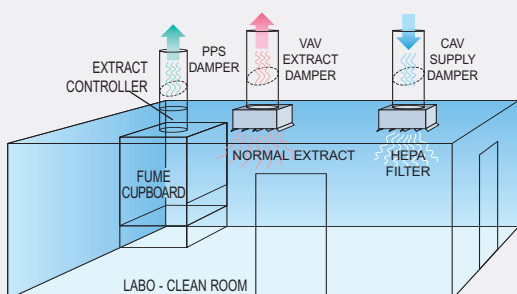


DPM PRESSURE SENSOR

Panel Mount Pressure or Velocity Transducers with remote alarms, analogue and digital interfaces. Traceable calibration certificates supplied as standard.

AIR MANAGEMENT SYSTEM

A complete turn-key system to control room pressure to $\pm 1\text{Pa}$. Fume cupboard face velocity to 0.5m/s at high speed and provide constant air changes into the labo - clean room.



DPC CONTROLLER

Fast and accurate controls to drive high speed dampers or invertors. Full PID stand alone controls with BMS interface.

CAV AND VAV DAMPERS

Accurate air flow measurement with the unique CMR Venturi built into the airtight shut-off damper to control room pressure or constant volume.



Metal Damper

PPS EXTRACT DAMPER

Poly-propylene control and shut off valve incorporating the CMR Venturi Nozzle. This is essential when dealing with corrosive extract air especially from fume cupboard systems.



PPS Damper

PRECISION COMPONENTS FOR VENTILATION AND PROCESS CONTROL

CMR CONTROLS

A Division of C. M. RICHTER (EUROPE) LTD

22 Repton Court, Repton Close,
Basildon, Essex SS13 1LN. GB
Website: <http://www.cmr.co.uk>

Tel: +44 (0)1268 287222
Fax: +44 (0)1268 287099
E-mail: sales@cmr.co.uk

