



Being Safe



Climate

## And after that...

The question of how well buildings perform relative to their design expectations has long worried architects

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Architecture stands out from other professions within the service sector, particularly education, health and social care, as having escaped the drive to measure performance. The proposition underlying the RIBA's recent research symposium 'The Design Quality Proposition: ensuring and communicating design quality in architectural practice' is that the value of design quality could be communicated more effectively to clients if it was verified through measurement.

Although standardised methodologies for evaluating building performance are available, these are still rarely fully embedded in practice. With their emphasis on energy efficiency and carbon emission, these methods are also too narrow in scope to provide comprehensive tools for measuring design quality. The symposium illuminated the way architects are confronted with the challenge of evaluating a wider range of 'qualities'.

The question of what constitutes design quality was investigated through three case-studies, of Wilkinson School, the Sainsbury Laboratory and Royal Road. These projects were reviewed from the perspective of architects and client (in one case only), followed by critiques from external rapporteurs. Although not sufficient to yield a new framework for assessing design quality, the case studies gave insights into a multiplicity

of design qualities that received recognition from clients and occupants.

The case studies showed the importance of evaluating design quality not purely on basis of the performance of the physical product, but also on the quality of partnerships in design as a social process. Wilkinson School and the Sainsbury Laboratory were both products of successful co-operation between clients, users and architects. According to Rod McAllister, the rapporteur, and project architect, Gavin Henderson, the design quality of the laboratory was the result of Stanton Williams' skill in engaging in an open inquiry with the client. The brief, budget and architectural concept developed in partnership with Dr Roger Freedman, academic head of plant research, and patron David Sainsbury. Stanton Williams was not hired as an expert in laboratories but for its skill in successful collaborative process involving the client and future occupants. The firm was in dialogue with the client for over

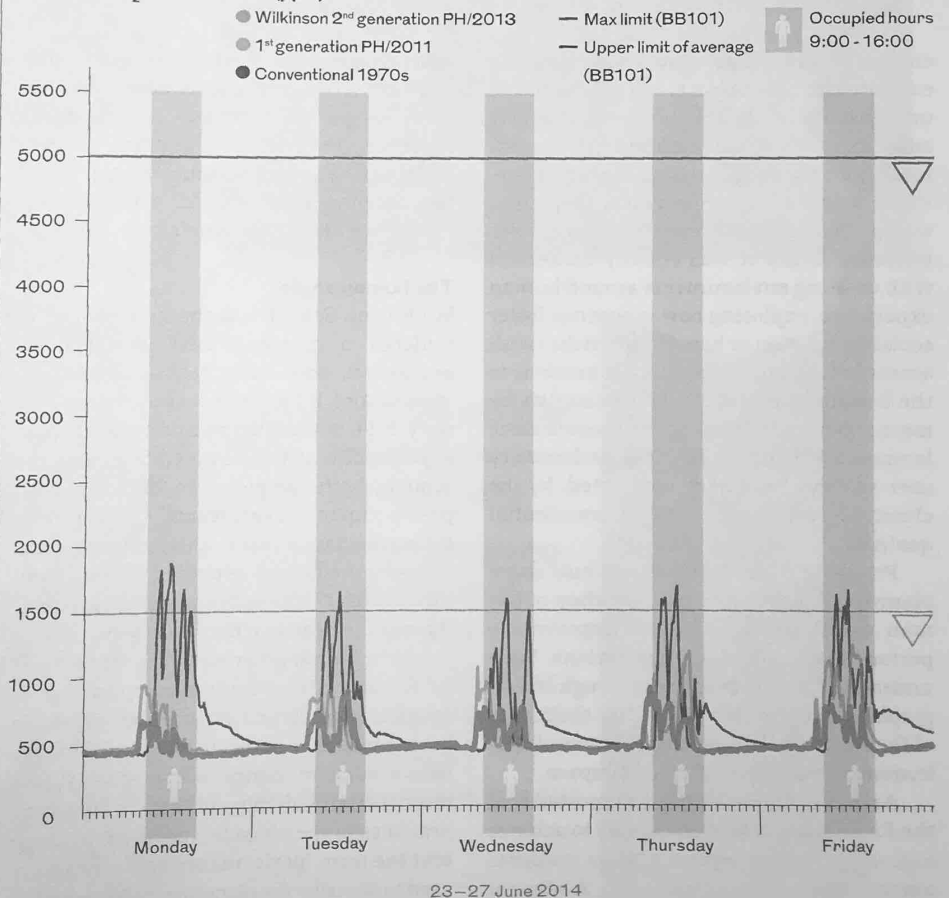
six months, engaging in a shared learning experience, before receiving the commission.

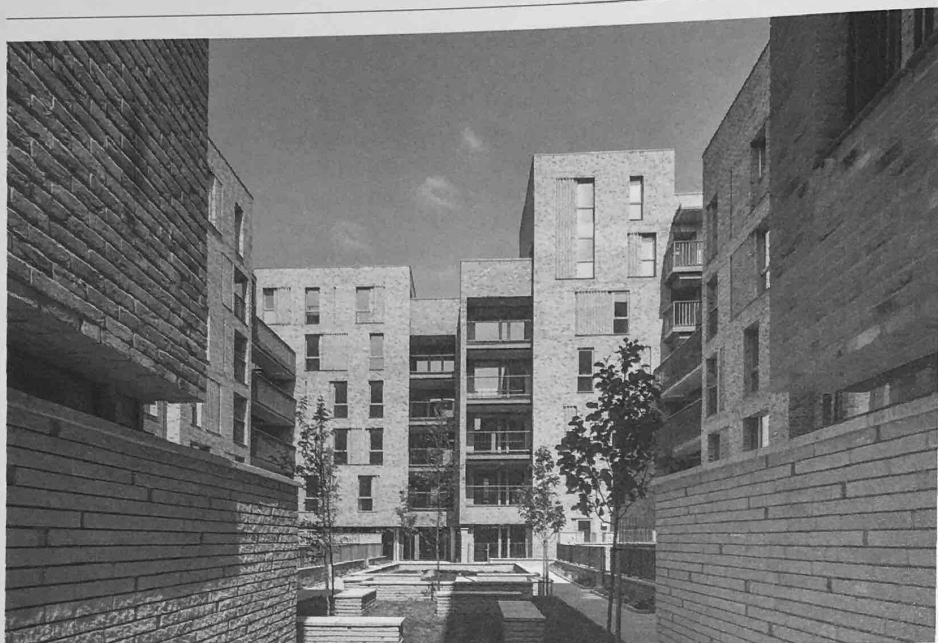
Similarly, architect Mark Lumley highlighted that the design for Wilkinson School was guided by the educational principles presented by the head teacher Tina Gibbons, who also spoke at the symposium. She saw her involvement in the design as a means to fundamentally rethink how she and her team approach teaching, and the architect engaged with her in a collaborative process. Professor Harry Daniels argued that the school was a rare example of collaborative practice, where the architect's role was to bring together people in the social process of design.

### Quality and efficiency

Construction quality and energy efficiency were central considerations in all three case studies. Wilkinson School is Passivhaus certified, the Sainsbury Laboratory received BREEAM excellent rating and Royal Road achieved Code Level 4. But the speakers

Summer CO<sub>2</sub> concentration (ppm)





Royal Road housing by Panter Hudspith attempts to give more identity to the surfaces and spaces.

emphasised that important design qualities exhibited in these projects can only be measured through studies of occupant behaviour and experience. Although Stanton Williams faced the challenge of designing highly serviced laboratory environments, the design was not the result of a process with a narrow technical focus. It was equally concerned with creating environments around human experience, exploring how spaces can foster social interaction or how work benches with access to daylight and visual connections to the botanic gardens can help scientists be more productive. It has been occupied since January 2011 but so far only preliminary user-surveys have been conducted, by the client, to evaluate these more experiential qualities.

Professor Alan Penn showed how space planning, if based on an understanding of human social interaction, can improve the performance of social organisations. Such understanding can be gained through ethnographic research methods, such as the coding of floor plans following observations of how human interaction is affected by space.

Architect Simon Hudspith reported that the Royal Road case study aimed to achieve high-density housing that gave its residents a sense of identity and belonging. A sense of

intimacy was to be created through the provision of communal courts and individual balconies and roof terraces. Challenging the repetitious building systems of the modernist Heygate Estate, this sense was to be further accentuated through irregular window arrangements and brick detailing.

#### The human angle

Wilkinson School was the only project to undergo a comprehensive performance evaluation, addressing technical and human factors. It has been occupied since January 2014, but Architype could also draw on experience with two of its previous Passivhaus schools, both completed in 2011 and with post-occupancy evaluations. Environmental performance was evaluated using common methods, such as energy metering and monitoring the indoor climate and air quality, but the head teacher also took an active role in facilitating a process of optimising its performance from environmental and pedagogical perspectives. Apart from reviewing how teachers or pupils use spaces, Gibbons held several meetings to explore with the teachers the challenges of adapting teaching practices to the physical space. In this context the term 'performance gap' – typically used to describe the discrepancy between the

Space planning, if based on an understanding of human social interaction, can improve the performance of social organisations

predicted and actual energy performance – acquires a much broader meaning.

Reviewing the design through the lens of activity theory, Ming Tse and Professor Daniels from the University of Oxford showed that the design of teaching practices and the physical environment were intimately linked, requiring teaching activities to be considered integral part of the building's operational life. The relationship between human behaviour and environmental performance was also addressed through the provision of visual user-guides and workshops. The participation of occupants in day-to-day operations was a prerequisite to achieving the best performance.

Taking a wider historical view I showed how environmental control in 19th century public buildings was a social process out of necessity. Without computerised controls, 'occupants' had to co-operate closely with the human 'operators,' facilitating a level of engagement that went far beyond that of modern building performance evaluations. Should modern post-occupancy evaluations therefore be understood as a way of re-establishing closer partnerships with occupants in achieving better performance in-use? ●

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