

**Curriculum Vitae
of
Catherine Elizabeth Simpson, C.Eng, C.Env, MAE, FIET, FEI, FCIBSE**

Date of Birth: June 1962

Address: Pardlestone Bungalow, Kilve, Somerset, TA5 1EQ

Contact details: 07957 827870, cathie@buildingsimulation.co.uk

Occupation: Chartered Engineer, Director
Independent Building Performance Consultant



EXPERT WITNESS EXPERIENCE

2020-to date	Macfarlanes – advisory report on potential claim for non-compliance with energy consumption targets
2020-2020	RPC – advisory report for remedial work on student accommodation
2019-2020	Eversheds Sutherland LLP - on site tests, reports, oral evidence for arbitration
2016-2018	RPC and DAC Beachcroft LLP – onsite tests, reports for mediation and remedial works
2018-2018	RPC, Residential Accommodation – pre-action advice
2017-2017	Laing O’Rourke Legal Department – advisory reports on residential development
2016-2017	Mayer Brown LLP, Custody Suite - reports for mediation and arbitration
2016-2016	Lend Lease, The International Quarter - agree and decide modelling dispute
2015-2016	Berwin Leighton Paisner LLP, Hospital - advisory report
2014-2015	Scotch & Partners – determine and advise on modelling dispute
2014-2015	Stephenson Harwood LLP, One Hyde Park – onsite tests and report for mediation
2014-2015	Hoare Lea & Partners, RAF Valley, assistance with thermal modelling evaluation and overheating
2012-2013	Macfarlanes LLP, 41 Millharbour – report for mediation
2012-2012	Pinsent Masons LLP, Jewish Free School – report for mediation
2008-2011	Beale & Co LLP, Building 12 Harbourside – reports for Technology and Construction Court

PROFESSIONAL QUALIFICATIONS

Member of The Academy of Experts (MAE)	2020
Qualified Expert Determiner	2020
Fellow of the Institute of Engineering and Technology (FIET)	2020
Register of Professional Energy Consultants (allowed to lapse 2017)	2015
ITC Level II Thermography (allowed to lapse 2017)	2011
Cardiff University Bond Solon (CUBS) Civil Expert Witness Certificate	2010
Chartered Environmentalist (C.Env)	2009
Fellow of the Energy Institute (FEI)	2009
Fellow of the Chartered Institution of Building Services Engineers (FCIBSE)	2009
Chartered Engineer (C.Eng)	1993
IQA Diploma in Quality Management (Distinction)	1992

EDUCATION

University of Cranfield (1985 to 1986) - M.Sc. Energy in Buildings
University of Bradford (1981 to 1985) - B.Sc. (Hons) Industrial Technology & Management
Bury Technical College (1979 to 1981) - B.Tech National Diploma in Business Studies (Distinction)

EMPLOYMENT SUMMARY

1988 to date	Building Simulation Limited (BSL) - 31 years as Principal Director
1987 - 1988	Amazon Energy Limited (Software developers) - Simulation Engineer
1986 - 1987	Haden Young Limited (Building Contractors) - Trainee Building Services Engineer
May - Sept 1985	Lennon Property Services (Property Developers) - Central London

EMPLOYMENT DETAILS

1988 to date Building Simulation Limited (BSL) - 32 years as Principal Director

Catherine founded the company to provide independent, state of the art thermal modelling and computational fluid dynamic (CFD) simulation to the construction industry with a focus on energy consumption and building performance. In 1995, Catherine won the simulation contract for the MoD Procurement Executive at Filton which established BSL as a significant player in the industry. Other high-profile contracts followed such as PFI projects at Hexham hospital, the Bluewater shopping centre, the Urbis Centre in Manchester, the V&A in London, as well as undertaking work for Land Securities, Stanhope, Grosvenor, Westfield Shopping Towns, The Prudential, LWT and the Central Veterinary Laboratories, MOD Benson and the Tate, for example.

Catherine has personally undertaken or project managed more than 1,000 computer simulation projects for a wide range of new, existing and re-purposed buildings. Approximately 70% of which have been new build, the majority with natural and mixed mode ventilation. The balance of Catherine's experience is within existing buildings with post occupancy problems such as high energy consumption, draughts, poor indoor air quality, poor performance of plant etc. Catherine was one of the first commercial computer modellers in the UK to use mean wind pressure coefficients (MWPC) from wind tunnel tests as boundary conditions in CFD and thermal models to assess natural ventilation within the built environment. Catherine presented a paper on this at the 2009 Building Simulation Conference.

Catherine was one of the first five BREEAM Assessors who worked with BRE to develop the scheme. Catherine was a BREEAM assessor from 1992 until 1998.

Catherine has 13 year's expert witness experience specialising in the use of computer modelling within the design process and assessment of building performance. For example, when designers use software for early design, evaluation of energy consumption, building performance such as over-heating and the design of naturally ventilated and air-conditioned spaces.

Catherine has extensive on-site physical testing experience which is integrated with computer-based analysis to identify the cause of problems and to provide evidence-based solutions. Catherine has an excellent track record of good correlation between building modelling and actual performance.

1987 - 1988 Amazon Energy Limited (Software developers) - Simulation Engineer

This company developed and sold TAS simulation and AMBIENS CFD software. Catherine trained in the use of the TAS software and undertook software training of new purchasers of the software in the UK and abroad including the Malaysian Jabatan Kerja Raya (JJR) in Kuala Lumpur, as well as Beta testing the software for the development team. Catherine also undertook consultancy in order to promote sales.

1986 - 1987 Haden Young Limited (Building Contractors) - Trainee Building Services Engineer

Catherine trained in mechanical services design and worked on a key project for Land Securities. Catherine was responsible for managing the out-sourcing of simulation consultancy to Amazon UK.

05 to 09 1985 Lennon Property Services (Property Developers) - Central London

01 to 09 1984 Undergraduate Industrial Placement, Lennon Property Services (Property Developers) - London

Catherine was personally recruited by, and appointed to work with, the Development Director. Attended contract meetings, design meetings, tenant negotiation meetings and assisted with compilation of projected cash flow for commercial land and property development. Catherine gained an insight into the management of property portfolios and the development of properties with Land Securities on behalf of the pension fund, Scottish Amicable.

KEY PUBLICATIONS/ROLES

EiBI December 2018	CPD Article for the Energy Institute on Thermal Imaging
R70L 2016-date	Chair of registered charity to promote construction qualifications in secondary schools
Rumford Club 2015-2016	Chair of Rumford Club – an informal club for construction industry professionals to debate
CIBSE 2016-2018	Council member
CIBSE 2014-2016	Vice-President
CIBSE 2012-2014	Board and Council member
BSRIA BG 48/2013	A Practical Guide to Building Thermal Modelling – co-author
CIBSE TM44:2011	Inspection of Air Conditioning Systems – Task group member and author
Building Simulation 2009:	Dynamic Thermal Modelling and Physical Wind Tunnel Testing – An Important Partnership
CIBSE AM13:2000	Mixed Mode Ventilation – Contract author
CIBSE AM11:1998	Building Energy and Environmental Modelling – Task group member