



DAVID K SMITH

CURRICULUM VITAE



DIRECTOR

PERSONAL DETAILS

PROFESSIONAL MEMBERSHIP: **BSc (Hons) CEng FIMechE FCIBSE Tech IOSH LCC**
AND QUALIFICATIONS

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DATE OF BIRTH: 2 January 1957

NATIONALITY: British

PARTICULAR EXPERIENCE

QUALIFICATIONS:

Graduated with 2(1) honours **Degree in Environmental Engineering** (1979)
30 years experience within the Building Services, Building Energy, and Property H&S fields
NEBOSH Health & Safety plus **Tech IOSH** membership
Low Carbon Consultant **LCC**
Approved **Carbon Trust Assessor**
Certified DEC assessor (re issue of Display Energy Certificates)
Certified EPBD TM44 assessor (re 5-yearly Air Conditioning Inspections)
Authorising Engineer for high risk Mechanical Systems (steam, HTHW, pressure systems, etc) & Confined Spaces

GENERAL EXPERIENCE:

Practically versed in all aspects of mechanical building services design, installation, commissioning, management, refurbishment & construction.

Comprehensive knowledge and experience within the mechanical building services industry including Design, Facilities Management, Health & Safety, Energy Conservation, Commissioning, Auditing, Fault Finding, litigation & Legislative Compliance.

Authorising Engineer responsible for implementing and auditing Safe Systems of Work for Mechanical systems and Confined Spaces.

High standard of IT skills which play an important role in all TSA work.

Particular interests in environmental issues, technology, optimum design solutions, low energy applications, maintenance, plant testing & building services performance.

EMPLOYMENT HISTORY:

4 years with a multi-disciplinary Practice including 7-month secondment to Malaysia
2 years overseas (Copenhagen & Bangkok) designing / Refurbishing Thai Airways Catering Centres
9 years as **Associate** for an 80-strong MEPH Consulting Practice in West London
3 years as **Technical Director** for large FM Consultant seconded to British Airways Property
15 years as **Mechanical Director** / co-founder of Technical Support Associates

EXPERT WITNESS:

66 Chiltern Street: Costain v MEPC (Solicitors: Dibb Lupton Broomhead) £1.76m Court Order for Pipework leaks, VAV design issues causing insufficient heating, psychrometric issues causing condensation, insufficient cooling, fresh air controls, site tests & remedial works

Belgrave Square: Solicitors: Mischon de Reya / Hallet & Co) £47K Court Order for non payment of Contract

Talbot Road: Tenant / Landlord dispute concerning cooking smells from adjacent lets. Problem found & resolved without Court Order

Fallowfield: Owner / Contractor dispute concerning HWS pressures via un-vented HWS system. Problem found & resolved without Court Order

Cranbourne: Owner / Contractor dispute concerning HWS pressures via un-vented HWS system. Problem found & resolved without Court Order

HEALTH & SAFETY:

Certified Authorising Engineer Mechanical (HTHW, Steam, Refrigeration & Mechanical high risk systems) since 1996. Has acted in this role for British Airways, BBC, DVLA, & Norwich Union (LST managed properties)

General Health & Safety work has included:

| | |
|--------------------------------|--|
| Awareness training | Reviewing / compiling Safety Files |
| CDM Coordinator (M&E Services) | Risk assessments |
| Confined Space certified | Safe Systems of work for Mechanical & CS |
| Control of Contractors | SOPs for Client operations |
| H&S Arrangements & Procedures | Surveys of commercial properties |
| H&S Policies | Workplace Risk Assessments |
| Incident Investigation | |
| Permit to Work procedures | |

PROJECTS:

| | | |
|------------------------|-----------------------|------------------|
| Airports | Headquarter Buildings | Offices |
| Banks | Health Care Homes | Prisons |
| Building Societies | Hospitals | Schools |
| Cargo Handling Centres | Industrial Buildings | Shopping Centres |
| Catering Centres | Institutions | Shops |
| Civic Buildings | Kitchens | Universities |
| Clean Rooms | Laboratories | |
| Data Centres | Museums | |

SPECIALITIES:

| | | |
|-----------------------|-----------------|--------------------|
| Compliance | Guidance | Maintenance |
| Energy | Health & Safety | Plant performance |
| Expert Witness | Legislation | Record Information |
| Facilities Management | Litigation | |

DESIGN WORK:


| | | |
|----------------------------|--------------------------|-----------------------|
| Air Conditioning | Cooling Towers | Induction Unit |
| AHUs | De-superheaters | Recuperators |
| BMS | Displacement Ventilation | Refrigeration |
| Boilers - LTHW | Dual duct | Run-around coils |
| Boilers – MTHW | Ductwork – high velocity | Split / Multi-split |
| Boilers - Steam | Ductwork – low velocity | Thermal Wheels |
| Cassaire systems | Evaporative Cooling | Variable speed motors |
| Chillers – absorption | Fan Coil Units | VAV |
| Chillers – centrifugal | Fans | Ventilation |
| Chillers – reciprocating | Free cooling | Versatemp |
| Chillers – screw | Heating Systems | VRF |
| Chillers – scroll | Heat Pumps | VRV |
| CHP | Hoods | |
| Close Control Environments | HVAC | |

EMPLOYMENT HISTORY


July 1997

TECHNICAL SUPPORT ASSOCIATES

Position: Director

Duties: Founding member of TSA together with Eur Ing John O'Neill BEng (Hons) CEng FIEE FCIBSE MaPS Tech IOSH MSL. Responsible for all mechanical & environmental project work and  Electronic Record Information.

PROJECT WORK has included commercial VAV projects, Micro-CHP installation, gas turbine CHP with absorption chillers, displacement "sock" ventilation, FCUs, boiler replacements, ventilation, energy surveys, solar heating, plant fault diagnostics, controls witnessing, boiler replacements, plus conventional HVAC projects

 Electronic Record Information has involved the development of a web-based record management system suitable for all building information including switchable drawing layers & all property information viewed through free software.

H&S WORK has included surveys of commercial properties, risk assessments, compilation of SOPs, audits, CDM Coordination & Authorising Engineer duties (HTHW, Steam, Refrigeration & Mechanical high risk systems) since 1996. Certified for Confined Space entry since October 2000

ENERGY WORK Approved Energy Assessor for Carbon Trust work over 30 surveys. All major project work involves energy appraisals, heat recovery & sustainability

1995 - 1997

FBA - BRITISH AIRWAYS TECHNICAL SUPPORT GROUP

Position: Technical Director

Duties: Responsible for all technical issues related to the management of the British Airways property portfolio, comprising over 400 UK buildings exceeding 1 million square metres. Working within the British Airways Property group developing ideas and procedures to streamline Property's operations

PROJECT WORK included:

Compiling **Standards & Guidance** for all property issues

Specifying and managing **surveys** of the Building Services installations for all principal buildings including:-

- Barcoding all assets and retrieving electronic data via PSION computers
- Compiling descriptions of all the services installed suitable for O&M Manuals
- Compiling BREEAM equivalent assessments via PSION computers
- Providing condition reports and budget estimates for remedial works
- Commenting on benchmark energy figures

Project reviews/audits of major capital investments including £250m new HQ, £200m Cargo Depot, £60m Data Centre, etc.

Energy analysis, appraisals, surveys, and benchmarking.

Expert Witness reports / investigations for properties in Belgrave Square, Pinner, & Stanmore including court adjudication.

Feasibility Studies including financial LCC/IRR appraisals for:

- Maintenance Base Heating - 14 MW gas-fired boiler installation, saving £1.2m /year fuel costs
- CHP options via contract energy management
- Data Centre air conditioning replacement
- Chiller replacements
- Reverse Osmosis water treatment plant

Planned Preventative Maintenance - developed costing methodology for all major FM Contracts, via:

- Scheduling PPM Task Sheets to each asset
- Agreeing time (and cost) required for each Task Sheet
- Developing computer analysis software to assess overall cost requirements
- Obtaining feedback/input from Building Facilities Managers

Health & Safety - developed revised Permit to Work procedures and compiled Safe Systems of work for all mechanical & electrical high-risk areas. Compiled property procedures for all Health & Safety issues in conjunction with BAP's Safety Department. AE Mechanical & CS for BA portfolio. Authorising Engineer duties.

Environmental - heavily involved in all environmental aspects of British Airways' Property organisation. Compiled **systems & guidance** on all environmental issues. Implementation of the removal/replacement of all existing CFC centrifugal chillers.

1985 - 1995

WATKINS PAYNE PARTNERSHIP

Position: Associate

Duties: Fully responsible for project conception, design, supervision and Client liaison. Reporting to Partner where necessary.

PROJECT WORK included:

Scheme designs, calculations and supervision & management of design project from concept to completion.

Project Management including formalisation of client brief, scheme feasibility/design, tender negotiations, co-ordination, programming site management, contract negotiations, co-ordination, programming site management, contract negotiations, cost and budget control, contractual disputes, final accounts, interim payments and client satisfaction. Multi-disciplinary, although mechanically biased technically.

Survey work, Feasibility Studies and Reports. Communications, correspondence and meetings with Clients, Contractors and design team members.

Computer use of spreadsheets, databases, commercial building services software (Cymap/Amazon) and AutoCAD.

Management of 15-20 Engineers within a multi-disciplinary design group, including group resourcing, staff management, administration and partnership business development.

Fee negotiation and control via Partners.

Projects: Range between speculative office designs, computer installations, specialist fitout works, retail, research buildings, prisons, litigation works, health care homes, museums, shopping centres, refurbishments and banks.

1983 - 1985

PER B. SCHLEITER A/S, COPENHAGEN, DENMARK

Position: Senior Engineer

PROJECT WORK included the full design of all mechanical services installations for a 30,000 m² Thai Airways Flight Kitchen in Bangkok, Thailand (+ refurbishment of existing facility). The Flight Kitchen accommodated hot kitchens, cold kitchens, food preparation area, stores, confectionery and bakeries, plus an administration block.

Services included:

Full **air-conditioning** to the Kitchen preparing 22,000 meals per day

Large **cold holding and freezer room** installations including R502 and brine systems

Hot and cold services

Central cooling plant design

22 no. air handling systems including heat recovery thermal wheels
Design co-ordination with architects, structural engineers and equipment designers.

Site supervision in Thailand of an upgrading contract using local labour and plant of the existing 13,000 m² Flight Kitchen, including client liaison, contractor organisation, co-ordination of design, supervision of installation, testing and commissioning, selection and utilisation of locally made plant, supervision of kitchen equipment installation.

Co-ordination with Copenhagen office/staff. Running Thai office, along with a Structural Engineer and local staff.

1979 - 1983

ROBERT, MATTHEW, JOHNSON-MARSHALL & PARTNERS

Position: Mechanical Engineer

Duties: Manual/computer calculations; building performance/energy predictions; Building Services design; site supervision; commissioning and testing; fault finding/diagnosis, drawing; project running; cost control/interim payments; writing computer programs; site surveying; design co-ordination; low-energy designs; sprinkler designs.

Projects: Government Training Centre, Malaysia (7-month posting), Banks, NFU HQ, Municipal Buildings, Offices, Institute of Physics, Financial Training Air Conditioning

1978 - 1979

ADAMS GREEN & PARTNERS

Position: Junior Engineer

Duties: Preparation of drawings; manual calculations; equipment selections; plant sizing; site surveying

Projects: Southampton University refectory, Housing, snagging

1976 - 1977

BCM HEATING COMPANY LIMITED

Position: Junior Engineer

Duties: Tendering; preparing BOQ's and SOR's; draughting; material ordering; working drawing co-ordination; site inspections and three months' pipe fitting on site.

CPD, TRAINING AND QUALIFICATIONS

| Year | Course | Qualification / Description | Competency / Knowledge Development |
|------------|---|---|--|
| 1973 June | O Levels | Mathematics, English, Physics, Geography, French, Technical Drawing, Music | Pre-Degree |
| 1975 June | A Levels | Mathematics, Physics, Art | Pre-Degree |
| 1979 June | Degree 4 year: 1975 to 1979 | BSc (Hons) degree in Environmental Engineering (Grade 2.1) South Bank University | My Degree covered the fundamental engineering principals of Building Services Engineering including 3-months practical training necessary for Chartered Engineer recognition |
| 1986 June | MCIBSE | Awarded Corporate Membership by CIBSE | Membership was achieved after proving both technical ability and industrial experience |
| 1986 June | CEng | Awarded Chartered Engineer status | Chartered Engineer status was achieved after proving both technical ability and industrial experience |
| 1991 Mar | MI Mech E | Awarded Corporate Membership by I Mech. E | Member of the Institution of Mechanical engineers was achieved after proving both technical ability and industrial experience |
| 1996 March | Authorising Engineer | Authorising Engineer course - WTI | Involvement with high risk mechanical systems such as steam and HTHW required specific training in order to manage the risks safely |
| 1999 June | Authorising Engineer | Authorising Engineer refresher course - WTI | Involvement with high risk mechanical systems such as steam and HTHW requires ongoing refresher training |
| 2000 | Various courses | CDM, Business Finance, Capital Planning and Business Case | Various |
| 2000 Oct | Confined Space Entry | Todo Mundo 3 day CS entry course | Involvement with Confined Spaces within buildings required specific training in order to manage the risks safely |
| 2002 May | Authorising Engineer | Authorising Engineer refresher course - WTI | Involvement with high risk mechanical systems such as steam and HTHW requires ongoing refresher training |
| 2002 July | AutoCAD 14 City & Guilds – 2D | Guildford Technical College - 1 year evening class | To become a competent user when required 2D version |
| 2003 Jan | Steam Utilisation | 3 day course | For steam work at TVC and AP/AE Duties |
| 2004 Aug | AutoCAD 14 City & Guilds – 3D | Guildford Technical College - 1 year evening class | To become a competent user when required 3D version |
| 2004 Nov | Confined Space Entry | Todo Mundo 1 day CS entry course | Authorising Engineer Refresher |
| 2005 | Various courses | Various courses on CDM, H&S, Business Finance, Capital Planning and Business Case | General CPD |
| 2005 March | Authorising Engineer | Authorising Engineer refresher course - WTI | Involvement with high risk mechanical systems such as steam and HTHW requires ongoing refresher training |
| 2006 | FIMechE | Awarded Fellow Membership by Institute of Mechanical Engineers | FIMechE |

Curriculum Vitae: **David Smith BSc(Hons) CEng FIMechE FCIBSE Tech IOSH LCC**

| Year | Course | Qualification / Description | Competency / Knowledge Development |
|------------|-------------------------------|--|---|
| 2006 Jan | FCIBSE | Awarded Fellow Membership by CIBSE | FCIBSE |
| 2006 Feb | NEBOSH | Distance learning 1 year H&S Certificate | NEBOSH within the Construction Industry |
| 2006 March | Tech IOSH | Awarded Technician Membership of the Institution of Occupational Safety & Health | Tech IOSH |
| 2007 Nov | Low Carbon Consultants | 2-day course to become an LCC Registered Consultant | LCC |
| 2008 Feb | LCC | Low Carbon Consultant | Part L Certification |
| 2008 March | Authorising Engineer | Authorising Engineer refresher course - Develop | Authorising Engineer Refresher |
| 2008 Dec | DEC | Display Energy Certificate course for DEC Certification | To become DEC Inspector Certified |
| 2008 Dec | TM44 AC Inspector | Air Conditioning Inspector course for TM44 Certification | To become an Air Conditioning Inspector Certified TM44 |
| 2008 Dec | Confined Space Entry | Todo Mundo 1 day CS refresher course | Authorising Engineer Refresher Confined Spaces |
| 2009 | iSBEM | Course / BRE Certification | To be certified to issue Part L Compliance Calculations |
| 2010 July | IFSM | FRA Certification | Fire Risk Assessment |
| 2011 March | Authorising Engineer | Authorising Engineer refresher course - Develop | Authorising Engineer Refresher |
| 2011 March | EPC | iSBEM levels 3 & 4 (BRE) | Part L Certification |
| 2012 Jan | Confined Space Entry | Safety Mundo 1 day CS refresher course | Authorising Engineer Refresher Confined Spaces |

Hobbies:

Squash (keen player)
 Manager of Surrey Sports Park Squash 4th Team (Guildford)
 Running, Keep Fit, Circuits, Body Pump
 Skiing
 Cycling
 DIY