# Dr Jagjit Singh
**BSc MSc PhD CBiol FIBiol FRSH FRSA**

## Managing Director

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**Experience**

**Environmental Building Solutions Ltd. 1999**

Managing Director of Environmental Building Solutions Ltd specializing in building health problems, heritage conservation and environmental issues. I have more than 15 years' experience as a building pathologist, environmental health scientist with expertise in heritage conservation, Indoor air quality & health in the UK and abroad in both academic and commercial environments.

I specialise in research, development and consultancy work in all aspects of biodeterioration of building materials, building health, sick building syndrome, allergy problems in buildings, indoor air quality, water and fire damaged buildings, environmental monitoring and control of timber decay and environmental assessment of buildings.

My current research focuses on interrelationships of building structures and materials with their environments and occupants.

Dr Singh is President Elect of ISBE International Society for the Built Environment.

***Oscar Faber 1993***

Regional Director specialising in the development of consultancy services in all of the above aspects.

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## Project experience includes:

## Indoor Air Quality and Building Health Surveys

**Crown Prosecution Building, London**
Detailed indoor air quality and building health survey followed by continuous environmental and air quality assessment including volatile organic compounds.

**National Power, Birchfield House, Birmingham**
Diagnostic, environmental health survey of this modern office building for pests, flees moulds and continuous environmental health monitoring.

**Fitzwilliam Museum, Cambridge**
Detailed indoor air quality survey for mycoflora and environmental conditions at the Founders Library, followed by continuous environmental and air quality assessment for mycoflora and environmental conditions.

**The Grove, Watford**
Detailed investigation for Anthrax undertaking surveys in The Grove followed by recommendations.

**New Hunts House, Guys hospital, London**
Monitoring indoor air quality for mycoflora and biological contaminants in this transgenic facility and advising on the remediation measures.

**Post Office Archives, London**
Monitoring and advising on the indoor air quality and biological contaminants.

**National Library of Scotland, Edinburgh**
Monitoring indoor air quality for mycoflora and biological contaminants in this transgenic facility and advising on the remediation measures.

**Lloyds 1986 Building:**
Investigation into ductwork corrosion, contamination and *Legionella* risk in ductwork.

**Dixons Warehouse, Stevenage**
Advice on indoor air quality and building health related to dust problems in the warehouse.

**1 Cornhill, London, EC3**
Detailed indoor air quality and building health survey followed by continuous environmental and air quality assessment including volatile organic compounds.

**148 Leadenhall Street, London, EC3**
Detailed indoor air quality and building health survey followed by continuous environmental and air quality assessment including volatile organic compounds.

**Dolphin Leisure Centre, Romford**
Detailed indoor air quality and building health survey followed by environmental and air quality assessment including pigeon investigation.

**Pizza Hut, Sidcup, Kent**
Detailed indoor air quality and building health survey followed by environmental and air quality assessment including fumes from burning motor.

**Waltham Forest Housing Action Trust**
Feasibility of shielding the magnetic fields induced by sub-station transformers.

**The Scottish Life Assurance Company, Edinburgh**
Detailed indoor air quality and building health survey followed by environmental and air quality assessment including house dust mite and mould survey at 30B Brunswick Road, Edinburgh

## Moulds and Environmental Assessment Surveys

**National Library of Scotland, Edinburgh**
Monitoring of the building environment and books for moulds and to provide recommendations for the environmental remediation and management.

**The Scottish Life Assurance Company, Edinburgh**
Detailed indoor air quality and building health survey followed by environmental and air quality assessment including mould survey at 30B Brunswick Road, Edinburgh

**Crown Prosecution Headquarters, London**
Moulds monitoring followed by water ingress from the roof. Monitoring the mycoflora and environmental conditions at this large office building over the summer and winter months.

**7-15 Fleet Street, London**
Infestation and decay monitoring throughout the refurbishment followed by recommendations for control.

**Ardress House, The National Trust, Northern Ireland**
Moisture and mould problem investigation at this National Trust Property.

**Royal William Yard, Plymouth**
Infestation and decay monitoring over a period of five years followed by recommendations for control.

**Windsor Castle, Windsor**
Monitoring and assessment of mycoflora over the period of drying down of the building after fire damage.

**Fitzwilliam Museum, Cambridge**
Mycoflora and environmental assessment of the Founder's library and the Handel House collection followed by recommendations for control.

**Queen Hotel, Hastings**
Monitoring of the building environment for moulds and to provide recommendations for the environmental remediation and management.

**The Corn Exchange, Manchester**
Monitoring of the building environment for moulds and to provide recommendations for the environmental remediation and management.

**New Hunts House, Guys hospital, London**
Monitoring of the building environment for moulds and to provide recommendations for the environmental remediation and management.

**Post Office Archives, London**
Monitoring of the building environment for moulds and to provide recommendations for the environmental remediation and management.

**National Power, Birchfield House, Birmingham**
Monitoring of the building environment for moulds and to provide recommendations for the environmental remediation and management.

## Fire Damaged Buildings

**Windsor Castle, Windsor**
Monitoring and assessment of mycoflora over the period of drying down of the building after fire damage.

**Hampton Court Palace, London**
Monitoring the drying down of the building after fire damage.

**The Assembly Rooms, Norwich**
Monitoring the drying down of the building after fire damage.

**Cullen Castle, Scotland**
Monitoring the drying down of the building after fire damage.

## Environmental Monitoring

**Crown Prosecution Headquarters, London**
Monitoring the internal environmental over a twelve month period to establish causes of ill health to the occupants.

**Cardiff Castle, Wales**
Monitoring of the building environment to determine the source of water damage to historic plaster.

**Harley Street, Crown Estates, London**
Monitoring of the building environment to determine the source of water damage to historic plaster.

**Portland Place, London**
Monitoring of the building environment to determine the source of water damage to historic plaster.

**7-15 Fleet Street, London**
Monitoring of the building environment throughout the refurbishment period to determine the source of water damage to internal finishes. Detailed diagnostic non-destructive surveys of damp masonry, plaster and timber decay in various buildings, followed by long term monitoring of environmental conditions and fungal and insect infestations combined with recommendations for protection and drying down of the building fabric.

**St Michael's Abbey, Farnborough**
Monitoring of the building environment to determine the source of water damage to internal finishes.

**Royal William Yard, Plymouth**
Monitoring of the building environment over a twelve-month period to determine the source of water damage to internal finishes. Detailed diagnostic non-destructive surveys of damp masonry, plaster and timber decay in various buildings within the dockyard, a Scheduled Ancient Monument, followed by long term monitoring of environmental conditions and fungal and insect infestations combined with recommendations for protection and drying down of the building fabric.

**74 St James's Street, London**
Detailed investigation of dampness in the structure and recommendations for environmental control. Spot monitoring of the building environment to determine the source of water damage to historic plaster and decorative finishes.

**Fitzwilliam Museum, Cambridge**
Environmental monitoring at the Founders library and environmental assessment of the building during the remediation programme.

**Lacock Abbey, Wiltshire, The National Trust**
Biological monitoring of the historic medieval decorative surfaces over a period of one year followed by spot environmental monitoring to determine the type and extent of biological deterioration to decorative and medieval surfaces.

**Queen Hotel, Hastings**
Monitoring of the building environment to determine the source of water damage to historic fabric of this hotel and to provide recommendations for the environmental stabilisation of the historic fabric.

**Kingsway College, London**
Monitoring of the building environment to determine the source of water damage to historic fabric of this grade II listed building.

**The Corn Exchange, Manchester**
Monitoring of the building environment throughout the refurbishment period following the IRA bombing damage to determine the source of water damage to internal finishes. Detailed diagnostic non-destructive surveys of damp masonry, plaster and timber decay throughout the building, followed by long term monitoring of environmental conditions and fungal and insect infestations combined with recommendations for protection and drying down of the building fabric.

**Telc Castle, Czech Republic**
Non-Destructive environmental surveys of UNESCO preserved castle. The project involves detailed investigation and long term monitoring and making recommendations for environmental control.

**New End Hospital, London**
Monitoring of the building environment over the refurbishment period and provide advice on environmental control of damp and infestation to this historic fabric. This followed by long term monitoring of environmental conditions and fungal and insect infestations combined with recommendations for protection and drying down of the building fabric.

**Dragor Church, Copenhagen, Denmark**
Installation of a monitoring system and monitoring of the building environment to give early warning of water penetration.

**Church of St Mary the Virgin, Edlesborough**
Investigation of biological damage to the stone fabric.

**York Crown Court, York**
Installation of a monitoring system and monitoring of the building environment to give early warning of water penetration.

**The Monument, London**
Installation of a monitoring system and monitoring of the towers environment over a six month period to establish the causes of deterioration to the internal structure.

## Timber Surveys

**7-15 Fleet Street, London**
Detailed investigation of decay to timbers throughout all the buildings. Monitoring of the building environment over through out the refurbishment period and to determine the source of water damage to internal finishes. This followed by long term monitoring of environmental conditions and fungal and insect infestations combined with recommendations for protection and drying down of the building fabric.

**Royal William Yard, Plymouth**
Detailed investigation of decay to timbers throughout all the buildings in the Royal William yard. Monitoring of the building environment over a long period to determine the source of water damage to internal finishes.

**74 St James's Street, London**
Detailed investigation of decay to structural timbers and recommendations for environmental control of timber decay. Spot monitoring of the building environment to determine the source of water damage to historic plaster and decorative finishes.

**The Grove, Watford**
Detailed investigation of decay to timbers in The Grove and to a number of listed cottages. Stress grading of principal timber members and recommendations for environmental control of timber decay.

**Clewer Manor, Windsor**
Detailed investigation of decay to principal structural timbers throughout the building.

**Harley Street, Crown Estates, London**
Detailed investigation of decay to structural timbers and recommendations for environmental control of timber decay. Monitoring of the building environment to determine the source of water damage to historic plaster.

**Portland Place, London**
Detailed investigation of decay to structural timbers to a number of flats and recommendations for environmental control of timber decay. Monitoring of the building environment to determine the source(s) of water damage to historic plaster.

**Albany of Piccadilly, London**
Detailed investigation of decay to structural timbers to a number of flats and recommendations for environmental control of timber decay.

**Victoria Law Courts, Birmingham**
Detailed investigation of decay to all the roof spaces and roof trusses of the great hall Grade I Listed structure using Resistograph technology.

**HSBC, 27 Hill Street, Mayfair, London**
Monitoring and advising on the timber decay and damp problems in the building following long term neglect.

**Shordetch Church, London**
Monitoring and advising on the timber decay and damp problems in the crypt of this church and first floor.

**St Blaise, Haccombe, Devon**
Monitoring and advising on the timber decay and damp problems.

**The Kings Head, Aylesbury**
Detailed investigation of decay to structural timbers, advice on eradication of deathwatch beetle and control of moisture in basement areas.

**Monastery of St Francis, Manchester**
Preliminary Investigation of decay to timbers throughout the buildings.

**Fitzwilliam Museum, Cambridge:**
Preliminary and detailed non-destructive surveys of moisture in masonry and plaster, timber decay, moulds and air quality followed by implementation of regular monitoring of environmental conditions.

**Telc Castle, Czech Republic:**
Detailed diagnostic non-destructive environmental and timber decay survey of UNESCO preserved castle followed by long term programme of monitoring for deterioration to decorative finishes, decay and infestation and making recommendations for environmental control.

**Somerset House, London**
Highly detailed non-destructive investigation of timber decay to this Grade I Listed structure using the latest Resistograph technology.

**Manchester Oxford Road Station**
Highly detailed non-destructive investigation of timber decay to this Grade II Listed timber railway station using the latest Resistograph technology.

**The Corn Exchange, Manchester**
Monitoring for timber decay and the building environment throughout the refurbishment period following the IRA bombing damage to determine the source of water damage to internal finishes. Detailed diagnostic non-destructive surveys of damp masonry, plaster and timber decay throughout the building, followed by long term monitoring of environmental conditions and fungal and insect infestations combined with recommendations for protection and drying down of the building fabric.

**Moy Timber Bridge, Inverness:**
Highly detailed non-destructive investigation of timber decay to this Grade A Listed timber Railway Bridge using the latest Resistograph technology.

**Round Chapel - Hackney United Reform Church:**
Environmental surveys of moisture and building fabric decay combined with long term monitoring of environmental conditions. This project won Civic Trust Award.

**Queen Hotel, Hastings**
Monitoring for timber decay and the building environment to determine the source of water damage to historic fabric of this hotel and to provide recommendations for the environmental control of timber decay.

**Circle Thirty Three Housing Trust, 391 High Street, Tottenham**
Monitoring for timber decay and the building environment to determine the source of water damage to the fabric of these flats and to provide recommendations for the environmental control of timber decay.

**Kingsway College, London**
Monitoring for timber decay and to provide recommendations for environmental control to historic fabric of this grade II listed building.

**The Mansion House, London**
Detailed investigation of decay to principal structural beams throughout the building. Monitoring the environment in the building to give early warning of water penetration.

**Goodwood Shell House, Goodwood**
Fiber optic inspection behind paneling to detect decay.

## Moisture Damage Surveys

**New Hunts House, Guys Hospital, London**
Monitoring and advising on the drying down of the basement areas over a six-month period following flood damage.

**Post Office Archives, London**
Monitoring and advising on the drying down of the basement areas following flood damage.

**22 Warwick Avenue, London**
Investigation of the causes of dampness in basement areas of 22 Warwick Avenue.

**Fitzwilliam Museum, Cambridge**
Investigation of the causes of dampness in basement areas and the Founders Library.

**HSBC, 27 Hill Street, Mayfair, London**
Monitoring and advising on the damp problems in the building following long term neglect.

**Shordetch Church, London**
Monitoring and advising on the damp problems in the crypt of this church and first floor.

**St Blaise, Haccombe, Devon**
Monitoring and advising on the damp problems in the crypt of the church.

**Butlers Wharf, London**
Monitoring and advising on the drying down of the building following flood damage.

**National Power, Birchfield House, Birmingham**
Monitoring and advising on the drying down of the building following flood damage followed by long term monitoring of environmental conditions and fungal and insect infestations combined with recommendations for protection and drying down of the building fabric.

**The Corn Exchange, Manchester**
Monitoring and advising on the drying down of the building following the IRA bombing damage to determine the source of water damage to internal finishes. Detailed diagnostic non-destructive surveys of damp masonry, plaster and timber decay throughout the building, followed by long term monitoring of environmental conditions and fungal and insect infestations combined with recommendations for protection and drying down of the building fabric.

## Pigeon Surveys

**Dorset Mansions, London**
Pigeon damage survey and advice on eradication of pigeons from the building.

**Dolphin Leisure Centre, Romford**
Pigeon damage survey and advice on eradication of pigeons from the building.

## Other information:

*Academic Training*

Pre-medical 1974-75
BSc Biological Sciences (Medical) - 1st Class
MSc Botany, Specialisation in mycology and plant pathology - 1st Class
PhD Mycology and Pathology

## Further Studies

Post Doctoral Fellow – Mycotoxins
Research Assistant - Biological Control

***Discovery***

Wild dry rot *(Serpula lacrymans)* in the Himalayas, 1994.

***Representation***

Chartered Biologist, Member of Institute of Biology
Fellow of the Royal Society for the Promotion of Health
Fellow of the Royal Society of Arts
Associate of Institute of Wood Science
Scientific Secretary to International Society for the Built Environment

***Papers***

Author of numerous scientific papers and communications on the decay of building materials, non-destructive inspection techniques, monitoring and environmental control, building biology, indoor air quality, sick building syndrome, allergy problems in buildings, mycology, pathology and fire damage.

***Books***

Singh, J and B knight, (2003) Environmental Monitoring of our Cultural Heritage; Sustainable Conservation Solutions, Published by Environmental Building Solutions Ltd., ISBN 0-9546505-0-6

Prof K.G. Mukerji, Prof C. Manoharachary and Dr Jagjit Singh, (2004) Rhizoplane-Rhizosphere-Mycorrhizosphere Interactions, Published by Springer-Verlag, Germany

Singh, J., 1994, *Building Mycology - Management of Health and Decay in Buildings,* E & FN Spon.

Singh, J. and Aneja, K.R., eds., 1999, *From Ethnomycology to Fungal Biotechnology*, Plenum Publishing Company.

Singh, J., Drdácky, M. and Palfreyman, J., 1994, *Conservation and Preservation of Timber in Buildings*, Aristocrat, Drdácky, Telc.

Singh, J. and Walker, B., 1996, *Allergy Problems in Buildings,* Quay Books.

Singh, J. and White, N., 1995, *Environmental Preservation of Timber in Buildings*, Oscar Faber Consulting Engineers Ltd.

Mukerji, K.G., Chamola, B.P., and Singh., 2000 Mycorrhizal Biology, Plenum Publishing Company.

*Meetings, Workshops and International Conferences (some examples)*

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| London, 2005 - | Damp and dry rot threats to the health of our cultural heritage, and building fabric |
| London, 2005 - | Moulds a threat to the health of our cultural heritage, health of building fabric and occupants |
| Bombay, 2000 - | Technology of conservation |
| Liverpool, 1999 - | Heritage Mycology and health |
| Bedford, 1998 - | A Healthy Agenda for Sustainable Development |
| India, 1997 - | From Ethnomycology to Fungal Biotechnology |
| London, 1997 - | Building Conservation and Health |
| Dublin, 1995 - | Environmental Preservation of Timber in Buildings |
| Telc, 1994 - | Conservation and Preservation of Timber in Buildings |
| Oxford,1993 - | Building Pathology 93 - Legislation |
| London, 1993 - | Allergy Problems in Buildings - Electromagnetism and dust in buildings and their health implications |
| Cambridge 1992 | -Building Pathology 92 - Management in Buildings |
| London, 1992 - | Allergy Problems in Buildings - Mould infestation in buildings and health implications |
| Ongoing | -Lectures on CPD courses for architects, surveyors, engineers, and SPAB scholars. |

*Year of birth 1956*