

# Dr Laurance J Donnelly

*BSc (Hons), PhD, CSci, CGeol, EurGeol, FGS, FGSA, IMMM*

**Forensic Geologist & Police Search Adviser**



## Biographical Summary

**Laurance Donnelly** is a highly qualified, chartered geologist, with a **First Class Honours Degree** in Applied Geology (Mining and Mineral exploration) and a **PhD** in Engineering Geology and Mining Geology. He has about 23 year's professional experience in mineral exploration, mining geology, mining hazards and engineering geology.

Laurance began his career in offshore oil exploration and as an exploration geologist in the quarrying industry, between his BSc and PhD. Following completion of his PhD he was recruited by the British Geological Survey to provide specialist support in mining, mineral exploration, engineering geology, geophysics and geohazards. He was subsequently seconded to International Mining Consultants and he then worked for Halcrow before joining Wardell Armstrong, where he currently holds the position of Associate Director (Geologist).

For 18 years Laurance has provided **expert advice to the Police as a Forensic Geologist and Search Adviser** to assist with ground searches and forensic investigations involving high profile crimes and critical cases. This has involved designing, implementing and managing searches for graves and other burials and advising on the geological (trace) evidence. Through this pioneering work, he has made significant contributions to the development of geoforensic search strategic and methodologies for locating graves and other burials. Laurance continues to work closely with the British police and associated government organisations to help implement these techniques and methodologies. He has been working in close collaboration with 'The Body Farm' (FBI Facility) in Tennessee, USA, to better understand the impact of human decomposition on geology.

In 2002, he was invited to Westminster Palace, Houses of Parliament, to give a presentation on Forensic Geology and the Moors Murders.

In 2006, he established the Forensic Geoscience Group, of the Geological Society of London, and he is the current serving Chair.

In 2009, he was invited to Colombia as part of a joint UK-US-Colombia team of geologist to provide forensic geology training and advice to the Colombian police, judges, barristers, lawyers and forensic scientists.

In 2010, the International Union of Geological Sciences (IGS) invited him to establish an International Work Group on Forensic Geology and since 2011 has been chair of the IUGS Initiative on Forensic Geology (IFG).

He is registered as an Expert Adviser with the National Policing Improvements Agency (NPIA) and works closely with the Home Office, Centre for Applied Science and Technology (CAST).

In addition to forensic geology he also has considerable experience in the provision of technical advice for mining and mineral exploration projects and in the field of engineering geology and geological hazards.

Laurance has published over 190 papers and articles and been invited to deliver over 70 guest lectures in the UK and world-wide.

He completed geological investigations throughout Europe, Latin America, Caribbean, Africa, Middle East, FSU countries, Asia and Australia.

Laurance is the recipient of prestigious international awards from the Geological Society of America, the Geological Society of London and the Institution of Mining and Metallurgy in recognition of distinguished and outstanding contributions to the multi-disciplinary fields of applied geology.

## Personal Details

|                      |  |
|----------------------|--|
| Profession:          | Geologist                                  |
| Employer:            | Wardell Armstrong                          |
| Position:            | Associate Director (Geologist)             |
| Years of experience: | 23   |
| Nationality:         | British                                    |
| Year of birth:       | 1968                                       |
| Place of birth:      | Manchester, United Kingdom                 |
| Marital status:      | Married, with two children                 |
| Home:                | Manchester, UK (and family home in Sicily) |

## Key Experiences

### Engineering Geology, Geotechnical & Geohazards

- Engineering geology
- Engineering geomorphology
- Engineering geophysics
- Desk studies
- Ground investigations
- Geotechnical risks
- Geological hazards
- Mining hazards, liabilities & risks

### Mineral Exploration & Mining Geology

- Mineral exploration
- Mineral resources
- Mining geology
- Feasibility/conceptual studies
- QA/QC audits
- Competent Persons Report (CPR)
- Fatal flaw analysis
- Mine design and stability

### Forensic Geology & Police Search Adviser

- Forensic geology
- Police searches
- Geological evidence
- Trace evidence
- Operational support
- Engineering forensics
- Environmental forensics
- Training

## Education

**PhD**, 1991-1994 (engineering geology, mining subsidence, geotechnical engineering and geohazards)

University of Nottingham, Department of Environmental & Mining Engineering

Thesis title; '*Predicting the Reactivation of Geological Faults during Mining Subsidence, Mineral Exploitation and Geotechnical Engineering*'.

**BSc Honours Degree (1<sup>st</sup> Class) Applied (Mining & Mineral Exploration) Geology**, 1986-1989

University of Leicester, Department of Geology

## Professional Qualifications

Member, Institution of Materials, Minerals & Mining (**IMMM**), c1998-1994 & 2012

Professional Member, International Association of Engineering Geologists (**IAEG**), 2011

Fellow, Geological Society of America (**FGSA**), 2008

Professional Member, American Association of Engineering Geologists (**AAEG**), 2007

Chartered Scientist (**CSci**), 2005

European Geologist (**EurGeol**), 2002

Chartered Geologist (**CGeol**), 1998

Fellow, Geological Society of London (**FGS**), 1997

## Awards

**Fellow of the Geological Society of America**, 2008

**Geological Society of London, Engineering Group Award**, 2008, in recognition of work in furthering the progress of engineering geology in the UK

**Geological Society of America, Burwell Award**, 2007, in recognition of distinguished contribution to the multidisciplinary field of engineering geology

Portrait placed in the **Geological Society of America, Hall of Fame**, 2007

**Institution of Mining & Metallurgy Award**, for outstanding work in Applied Geology, 1989

## International Geological Experiences

**Europe:** Austria, Belgium, Greece, Finland, France, Former Yugoslavia (Slovenia), Ireland, Italy, Netherlands, Northern North Sea (Norway), Northern Ireland, Portugal, Sicily, Spain

**Latin America & Caribbean:** Antigua, Colombia, Costa Rica, Dominican Republic/Haiti, Guyana, Montserrat, Nicaragua, Panama, Puerto Rico, Trinidad & Tobago, Venezuela

**Asia:** China, India, Iran, Mongolia, Nepal, North West Pakistan (Kashmir)/Afghanistan frontier

**Australia:** New South Wales & Queensland

**Middle East:** United Arab Emirates (Dubai & Abu Dhabi)

**Russia and FSU:** Russia, Kazakhstan, Ukraine

## Currently Active Professional Positions

**Forensic Geology Adviser:** Geologia Forense, Rome, Italy, 2012-present

**Member:** Geological Society of London, Periglacial Working Group, 2011-present

**Board Member:** Quarterly Journal of Engineering Geology & Hydrogeology (QJEGH), 2009-present

**CIRIA:** Co-author & Steering Committee Member, for the rewrite of CIRIA 32 'Construction Over Abandoned Mine Workings', 2010-present

**Founder & Chair:** International Union of Geological Sciences (IUGS), Initiative on Forensic Geology, 2011-present

**Special Adviser:** Geoforensics and Specialist Search International (GSSI), 2009-present

**Founder:** Geoforensic International Network (GIN), 2008-present

**Honorary Member:** Saddleworth Archaeological Trust, 2007-present

**Founder & Chair:** The Geological Society of London, Forensic Geoscience Group (FGG), 2006-present

**Greater Manchester Police:** Personnel Vetting, National Security Clearance, SC level, 2006-present

**BSc course designer & lecturer:** Forensic Geology, University of Leicester, 2006-present

**Expert Adviser:** National Policing Improvements Agency (NPIA), 1994-present

**Registered participant:** Geological Society and Science Council, CPD scheme, 1998-present

**Mentor:** Geological Society of London, Chartered Geologist (CGeol) scrutineer, 2004-present

#### Former Positions

**Officer:** International Union of Geological Sciences (IUGS), Commission on Geoscience for Environmental Management (GEM), Working Group on Forensic Geology, 2009-2011

**Geoforensic & Geological Adviser:** Institute for Field Archaeologists (IFA), 2008-2011

**Member:** Geological Society of London, Geohazards Working Party, 2002-2011

**Organiser:** Conference on Piling & Deep Foundations, Optimising Foundation Design and Construction in the Middle East, Session on the Detection and Mitigation of cavities in Abu Dhabi and Dubai, 2009

**Organiser & Chair:** Conference on Geoscientific Equipment and Techniques at Crime Scene, The Geological Society, Forensic Geoscience Group, December 2008

**PhD External Examiner:** Mining subsidence, University of Nottingham, 2007

**Committee Member:** Soil Forensic International Conference, Forensic Geology Session, Macaulay Institute, Edinburgh, 2006-2007

**Member:** Geoforensic and Information Management for Crime Investigation (GIMI), Macaulay Institute, 2005-2008

**Member, Conference Organising Committee:** International Association of Engineering Geology Conference (IAEG) & UK field trips organiser, 2003-2006

**PhD External Supervisor:** Coal mining hazards, University of Birmingham, 2002-2006

**Committee Member:** Geological Society of London, Fellowship & Validation Group, 2001-2004

**Visiting Fellow:** Nottingham Trent University, Geohazards Group, 2000-2004

**Committee Member:** East Midlands Geological Society of London, 2000-2004

**Committee Member:** Public Understanding of Volcanic Hazards, Geological Society, 1999-2000

**PhD External Examiner:** Rock mechanics University of Nottingham, 1999

**Committee Member:** Geological Society of London, Engineering Group, 1998-2004

**MSc course designer & lecturer:** Engineering Geology, Nottingham Trent University, 1996-1998

**MSc course designer & lecturer:** Geological Hazards, Nottingham Trent University, 1996-1998

**Member:** Institution of Mining & Metallurgy, 1986-1990

**Member:** Institution of Quarrying, 1986-1990

**President:** Leicester Mining Geology Society (LMG), 1988-1989

#### Employment Record

|                     |  |
|---------------------|--|
| <b>2010 to date</b> | <b>WARDELL ARMSTRONG LLP &amp; WARDELL ARMSTRONG INTERNATIONAL LTD</b><br>Associate Director (Exploration, Mining and Engineering Geology)             |
| <b>2003 - 2010</b>  | <b>HALCROW GROUP LTD</b><br>Principal Engineering Geologist and Mining Adviser   |
| <b>1998 - 2003</b>  | <b>INTERNATIONAL MINING CONSULTANTS LTD &amp; BRITISH GEOLOGICAL SURVEY</b><br>Senior Exploration, Mining and Engineering Geologist                    |
| <b>1994 - 1998</b>  | <b>BRITISH GEOLOGICAL SURVEY, Groundwater, Geotechnical and Engineering Geology Group</b><br>Mining & Engineering Geologist (Geohazards Specialist)    |
| <b>1991 - 1994</b>  | <b>UNIVERSITY OF NOTTINGHAM, Department of Mining and Environmental Engineering</b><br>Full time PhD Research (funded by the British Coal Corporation) |
| <b>1990 - 1991</b>  | <b>REDLAND AGGREGATES LTD</b><br>Exploration Geologist & Assistant Quarry Manager (temporary position between BSc and PhD)                             |
| <b>1989 - 1990</b>  | <b>EXPLORATION LOGGING INC.</b><br>Mud- Logger and Off-shore Oil Exploration Geologist (temporary position between BSc and PhD)                        |
| <b>1988 - 1988</b>  | <b>ARC Eastern LTD</b><br>Exploration Geologist (undergraduate placement)  |

#### Continuation of Professional Development (CPD)

**Publications:** Published approximately 190 articles in refereed journals, conference proceedings, magazines, newspapers and reports of the British Geological Survey.

**Book:** Co-author of the critically acclaimed book: **Bell, F. G. & Donnelly, L. J. 2006. Mining & Its Impact on the Environment. Taylor & Francis, London**.

**Confidentiality:** Author of several hundred 'secret' 'restricted' or 'confidential' documents for the Police (maps, technical notes, presentations, search strategies, search records & reports), mining companies, banks and investors

**TV and media:** Featured in several documentaries for TV, radio and news programmes promoting geohazards, mining hazards and forensic geology.

**Public and private guest speaker:** Laurance has been invited to approximately 98 events and meetings to deliver presentations, and key-note lecture on forensic geology, mining, mineral exploration, geohazards and engineering geology, 63 of these have been on forensic geology. These have taken place at the House of Commons, Westminster Palace (All-Party Parliamentary Group for Earth Science), International Union of Geological Sciences (IUGS), Geological Society of London (GSL), Geological Society of America (GSA), British Geological Survey (BGS), UNESCO Headquarters (Paris), Institution of Civil Engineers (ICE), Construction Industry Research and Information Association (CIRIA), Royal Institute of Chartered Surveyors, (RICS), Institution of Mining & Metallurgy (IMM), National Policing Improvement Agency (NPIA), Police National Search Centre (PNSC), Home Office Scientific Development Branch (HOSDB), Colombian Police Headquarters (Bogota), Los Angeles Police, County of Los Angeles Sheriff's Department, University of Tennessee, Department of Forensic Anthropology & The Body Farm (FBI Facility), numerous UK Police Forces, mining companies, engineering firms, lawyers, insurers, loss adjusters banks, several British and overseas universities and schools.

#### **Contact Details**

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## **Selected Operational Cases and Provision of Advice**

Dr Donnelly has considerable experience in the design, implementation and management of ground searches with the Police to help search for graves, items and objects of value or evidential items. More notable projects, investigations or advice provided includes the following:

### **National Policing Improvements Agency, Experts Database (2006-2012)**

Registered as an 'Expert Advisor' (EA) in Forensic Geology on the National NPIA database.

### **The Moors Murders, Greater Manchester Police (1994-ongoing)**

Forensic geologist and search advisor for the search of Saddleworth Moor, northern England, for the last remaining 'Moors Murders' victim. This particular search began in 1994 and has experienced several phases of intense search. The search is currently ongoing.

### **Centre for Applied Science & Technology (CAST) (formerly, Home Office Scientific Development Branch, HOSDB) (2009-ongoing)**

Advised HOSDB on the purchase of geophysical equipment required for criminal and counter-terrorism burials. Provided advice and guidance on the recruitment of a specialist geophysicist.

Provision of advice for the design and implementation of ground searches

### **A Northern England Police Force (2011)**

Design of a search methodology and strategy for missing persons believed to be buried in a remote, unmarked shallow graves.

### **A Midlands Police Force (2011)**

Provision of informal advice for a missing person in the Midlands.

### **Search for a missing person in Northern Ireland (2011)**

Provision of informal advice for a missing person in Northern Ireland.

### **Search for a missing person in Scotland (2011)**

Provision of informal advice to the Police for a missing person in Scotland.

### **A Eastern England Police Force (2010)**

Design of a search methodology and strategy for a missing child, believed to be buried in a remote, unmarked shallow grave. This involved attendance at briefings with the SIO and search team, followed by a visit to the search area with the force POLSA and Behavioural Profiler to conduct a geoforensic investigation.

### **Greater Manchester Police, search for a grave (2006)**

Provision of informal advice to the POLSA, search teams & SIO during the search agricultural land for a shallow homicide grave. A geomorphological and geological analysis of high resolution air-photos was undertaken and this helped to find the murder victim in an shallow, unmarked grave.

### **Greater Manchester Police, search for burials (2006-2009)**

Provision of general advice to POLSA & search teams on the search of the ground in the Greater Manchester area for burials, including fire-arms and other objects.

### **Search for a homicide grave, USA, Federal Bureau of Investigation (FBI) (2006)**

Provision of UK based advice to the FBI and a specialist canine search advisor during the search for a shallow grave in the USA, which resulted in the discovery of the victim.

### **Geological (trace) evidence, South of England Police Force (2006)**

Provision of advice on geological trace evidence for a murder investigation. This involved the peer review of reports on the mineralogy of soils and sediments found on a victim's body and other objects associated with a suspect/offender.

### **Search with Staffordshire Police & Home Office Scientific Development Branch (HOSDB)**

Responsible for the design, implementation and co-ordination of a search with the Staffordshire Police POLSA, search teams and HOSDB. This resulted in a high assurance search being carried out in Staffordshire following the discovery of high monetary value Anglo Saxon gold.

**NPIA, search for a missing person on a Scottish island Scotland (2010)**

Provision of informal advice to British police officers and the NPIA National Search Advisor during the design and deployment of a search for a missing person on a remote Scottish island. The remains of the victim was subsequently found in a shallow grave on a sandy beach.

**Colombian Police (2009)**

Visited Colombia as part of a USA & UK team of forensic geologists to deliver a series of lectures on geoforensics to an audience consisting of; judges, lawyers, police officers, forensic geologists and other forensic scientists. Provided advice on search to the Colombian police at their headquarters and training academy in Bogota, to help locate homicide graves, mass (genocide) graves, narcotics, firearms and explosive devices containing minimal metal components.

**Search for a missing person in Staffordshire (2006)**

Provision of informal advice to the NPIA National Search Advisor and a specialist canine search advisor for the search for a missing person in Staffordshire.

**Search for a missing person in Derbyshire (2006)**

Provision of informal advice to the NPIA National Search Advisor and a specialist canine search advisor for the search for a missing person in Derbyshire.

**Search for a missing person in Yorkshire (2006)**

Provision of informal advice to the NPIA National Search Advisor and a specialist canine search advisor for the search for a missing person in Yorkshire.

**Search for a grave (cold case) in Virginia, USA (2006)**

Provision of UK-based informal advice for the search of a grave in a woodland and a lake in Virginia, USA.

**Search for missing persons in Northern Ireland (PSNI) (2005 & 2008)**

Provision of informal advice to the Police Service of Northern Ireland (PSNI) and Queens University Belfast for the search for missing persons and other buried objects related to IRA activities during 'the troubles.'

**Search of a structure in Jersey (2007)**

Provision of informal advice to the NPIA National Search Advisor and a specialist canine search advisor for the search of a building in Jersey.

**NPIA, Search for a missing British citizen in Australia (2006)**

Provision of informal advice on search strategy, methodology and techniques for a missing British person in northern Australia (in association with the Australian Federal Police).

**NPIA, search for a missing British citizen in Portugal (2007)**

Provision of informal advice to British police officers and the NPIA National Search Advisor for the search of a missing British citizen in Portugal. A visit to Portugal was carried out in 2008 to provide guidance on geological and geophysical search methods and techniques.

**NPIA, search for a missing person in Scotland (2008)**

Provision of informal advice to British police officers and the NPIA National Search Advisor for the search of a missing person in Scotland, thought to be buried within a large area of agricultural land or woodland.

**Marketing and Promotion of Forensic Geology****Westminster Palace, House of Commons (2002)**

Invited to the House of Commons, Westminster Palace, to give a presentation on the applications of Forensic Geology to Policing and the search of Saddleworth Moor.

**International Union of Geological Sciences (IUGS), Initiative on Forensic Geology (2011)**

Founder and Chair of IUGS-IFG; an international working group on forensic geology.

**The Geological Society of London, Forensic Geoscience Group (FGG) (2005-2012)**

Founder and current Chair of a new specialist group in the Geological Society of London, 'The Forensic Geoscience

*Group' (FGG)*. FGG aims to develop and promote the study and understanding of forensic geoscience (geoforensics), by creating a network for geoscientists and related specialists to; share knowledge, review and disseminate information, facilitate multi-disciplinary collaboration, promote best practice, discuss case histories, share geoforensic experiences, develop national and international contacts, stimulate discussions and debates. This is achieved by; the circulation of emails, organisation of meetings, conferences, seminars, workshops with related forensic and other specialist groups, promoting world-wide research, training and teaching in the field of geoforensics. FGG has a growing network of contacts and brings together forensic geoscientists and related experts from; academia, industry, consultancy, government, police, law enforcement and the military, both nationally and internationally throughout the world.

**International Union of Geological Sciences (IUGS), Initiative on Forensic Geology (2011)**

Delivered a presentation to IUGS, at UNESCO headquarters, in Paris, which resulted in the elevation of 'Forensic Geology' to the status of 'Initiative' and the establishment of the IUGS Initiative on Forensic Geology.

**International Union of Geological Sciences (IUGS) Working Group on Forensic Geology (2009-2011)**

Visited Montevideo, in Uruguay to become inaugurated as an 'Officer' of the International Union of Geological Sciences (IUGS). Responsible for establishing an; 'International Working Group on Forensic Geology as part of the Commission on Geoscience for Environmental Management (GEM). In 2010, the IUGS-GEM, Geoforensic International Network (GIN) was established and included meetings held in Windhoek, Namibia, to unite forensic geologists from around the world and promote best practice.

**National Policing Improvement Agency (NPIA) & Police National Search Centre (PNSC) Conference**

Invited as a guest speaker to the NPIA & PNSC, POLSA Conference, in Bournemouth, on 11 November 2009, to deliver a paper on '*The Moors Murders and Geoforensic Search Strategies*'. The theme of the conference was *Developing the POLSA Role to Meet the Challenges*'. The presentation was delivered with two Greater Manchester Police POLSAs.

**Denver Police, USA (2007)**

Meeting with Denver Police for the mutual exchange of ideas on methods and techniques in search and geological trace evidence.

**Dutch Police (2008)**

Informal discussions and provision of advice on search strategies, methodologies and instrumentation to locate burials.

**British Geological Survey (1998-2010)**

Responsible for establishing collaboration between the BGS and NPIA in the field of forensic geology.

**Los Angeles Police Department (LAPD) & Los Angeles Sheriff's Department (2010)**

Discussions and provision of informal advice on methods and techniques in forensic geology and geological trace evidence.

**Federal Bureau of Investigation (FBI) (2010)**

Informal advice on methods and techniques in forensic geology and the potential for closer collaboration to promote and develop geoforensics in policing and law enforcement.

**Namibia/South African Police (2010)**

Informal discussions and provision of advice on search to locate burials in sub-saharan Africa and general advice on geological techniques applicable to fraud and other serious crimes.

**Search for a crashed Spitfire Plane from Second World War (2010)**

Provision of general advice on the search for a buried plane in Ireland.

**Search to verify the content of graves, Mauritania (2010)**

Provision of general advice on the search to provide the content of suspected tribal graves in the vicinity of the Guelb Moghrein Copper-Gold Mine, in Mauritania.

**Centrex (2005) and National Policing Improvements Agency (1996-2010)**

Provision of advice to the NPIA on search strategies, methodologies and choice of search assets/instrumentation. Contribution to a NPIA training document on the use of geology during '*Body Recovery*'. Collaboration with members of the CATCHEM team including the senior Behaviour Investigative Advisor and Clinical Psychologist, on behavioural profiling, environmental profiling and victimology assessments.

#### **Police National Search Centre (PNSC) (2007-2010)**

Advise and collaboration with POLSA and search teams at the PNSC.

#### **Ministry of Defence, Defence Science and Technology Laboratory (DSTL) (2006-2008)**

Provided informal advice to the DSTL Forensic Geophysicist Advisor on geology, geological exploration and search methods and techniques, to help locate burials.

#### **Royal Air Force, Joint Air Reconnaissance Intelligence Centre (JARIC) (2006-2007)**

Provided informal advice to the JARIC Aerial Imagery Analyst Expert for the geological and geomorphological analysis of high resolution imagery to help search vast expanses of open land for a unmarked grave.

#### **Royal Engineers British Army (2006-2008)**

Provided informal advice for the RESA and Military Advanced Search Advisor on geological and geomorphological analysis of high resolution imagery, geomorphology, geology and geophysics to help search vast expanses of open land for a unmarked grave.

#### **Oak Ridge National Laboratory (ORNL) and 'The Body Farm (FBI Training Facility)', in Knoxville, Tennessee, USA (1998-2010)**

Responsible for pioneering research with ORNL and 'The Body Farm' which is aimed at; determining the influence of geology on human decomposition or preservation to help during the design of searches to locate shallow unmarked, homicide graves, and gaining a better understanding of the detection capabilities of specialist canine search assets.

#### **California Association of Criminalistics (2010)**

Visited Long Beach, in California, to attend a soil forensic conference and to present the concepts of the RAG (**Red-Amber-Green**) prioritisation methods and diggability surveys as part of searches to locate burials.

#### **INTERPOL (2010)**

Part responsible for FGG & IUGS representation at the INTERPOL conference, Lyon, in France.

#### **International Union of Geological Sciences (IUGS), UNESCO Headquarters, Paris (2011)**

Invited speaker at the International Union of Geological Sciences (IUGS), 62nd Executive Committee Meeting, held at UNESCO Headquarters, in Paris, on Tuesday 22nd February 2011.

#### **Forensic Geology Presentations, 2002-2012**

1. **Recent Advances in Search and the Geological (Trace) Evidence Aspects of Forensic Geology for Police and Law Enforcement Investigations.** 34th International Geological Congress (IGC2012), Forensic Geoscience Session, Brisbane, Australia, 5-10 August 2012 (pending).
2. **Determination of a Forensic Geology and Police Search Strategy to Locate Shallow Burials Associated with Crime.** The Geological Association of Canada (GAC) and the Mineralogical Association of Canada (MAC) Annual Meeting. St. John's, Newfoundland, Canada, 27-29 May 2012 (pending).
3. **How Forensic Geology can help in the solving of crimes.** Neston Cricket Club, Station Road, South Wirral, Cheshire, Monday 12 March 2012, 18:30-20:00 (pending).
4. **How do Geologists' help the Police Investigate Crime? The Applications of Forensic Geology to Geological (Trace) Evidence and Search.** The De Le Beche Society, 1 March 2012, 17:00-18:00 London (pending).
5. **Developing the Role of Forensic Geology in Policing and Law Enforcement.** Central Scotland Group of the Geological Society, 21 February 2012, 18:00-19:00hrs (pending).
6. **How Forensic Geology can help in the solving of crimes.** Blackpool Geographical Association, The Blackpool Sixth Form College, Blackpool, Lancashire, Monday 6 February 2012, 18:30-19:30 (pending).
7. **The Role of Geoforensics (Forensic Geology) in Policing & Law Enforcement: How do Geologists' help the Police Investigate Crime?** Liverpool Geological Society, John Moores University, Byrom Street, Liverpool, Tuesday 1st November 2011, 19:30-20:30.
8. **Inaugural meeting and formal launch of the International Union of Geological Sciences (IUGS), Initiative on Forensic Geology (IFG). Welcome and official launch.** Hotel Nord Nuova Roma, Massimo Room, Rome, Italy, Sunday 18 14:30-14:45.



9. **The Renaissance in Forensic Geology and Events Leading to the Establishment of the IUGS Initiative on Forensic Geology.** International Union of Geological Sciences (IUGS), Initiative on Forensic Geology (IFG), Massimo Room, Rome, Italy, Sunday 18 September 14:45-15:20.
10. **Update on 'A Guide to Forensic Geology'.** International Union of Geological Sciences (IUGS), Initiative on Forensic Geology (IFG), Massimo Room, Rome, Italy, Monday 19 September, 09:20-09:30.
11. **34th International Geological Congress 2012, in Brisbane, an update.** International Union of Geological Sciences (IUGS), Initiative on Forensic Geology (IFG), Massimo Room, Rome, Italy, Monday 19 September, 15:50-15:30.
12. **Management, Structure and Objectives of IUGS IFG and Some Challenges Ahead.** International Union of Geological Sciences (IUGS), Initiative on Forensic Geology (IFG), Massimo Room, Rome, Italy, Monday 19 September, 16:40-17:10.
13. **Geoforensic Search Strategy for Graves and Burials.** International Union of Geological Sciences (IUGS), Initiative on Forensic Geology (IFG), Training and Development in Trace Evidence and Search for Criminal Investigations, Università di Roma Tre, Faculty of Science, Tuesday 20 September, 11:00-11:20.
14. **The Global Renaissance in Forensic Geology & IUGS Initiative.** International Union of Geological Sciences (IUGS), Initiative on Forensic Geology (IFG), Training and Development in Trace Evidence and Search for Criminal Investigations, Università di Roma Tre, Faculty of Science, , Tuesday 20 September, 13:00-13:10.
15. **Sherlock Homes to CSI: How do Geologists Help Solve Crime?** The Renaissance in Forensic Geology: Advances in Forensic Geology in the Past Ten Years. British Festival of Science, University of Bradford, Tuesday 13 September 2011, 13:30-13:50.
16. **Advances in Forensic Geology.** BBC/Media interview. British Festival of Science, University of Bradford, Tuesday 13 September 2011, 18:00-18:30.
17. **Introduction to Forensic Geology.** University of Leicester, Department of Geology, Bennett Building, Thursday 24 March 2011, 11:00-12:30.
18. **The Role of Forensic Geology in Policing: Developing a Strategy for Ground Searches and Burials.** Northumbria Police Headquarters, North Road, Ponteland, Newcastle upon Tyne, Thursday 10th March 2011, 13:30-c15:00
19. **Presentation on Recent Advances in Forensic Geology.** Invited speaker, International Union of Geological Sciences (IUGS), 62nd Executive Committee Meeting, UNESCO Headquarters, Paris, Tuesday 22nd February 2011, 2pm.
20. **The role of Forensic Geology in Policing and Law Enforcement. How do geologists help the Police investigate Crime?** Oxford University, Department of Geology, Thursday 10th February 2011, 16:00-17:00.
21. **Environmental and Criminal Forensics. Invited Chair of Session,** Geological Society of London, Forensic Geoscience Group Conference, 16 December 2010, Burlington House, London.
22. **Developing the Role of Forensic Geology (Geoforensics) in Policing & Law Enforcement: How do Geologists help the Police Investigate Crime?** Wardell Armstrong International, Monthly Internal Seminars, Wheal Jane, Cornwall, Monday 6th December 2010, 16:00-17:00.
23. **Forensic Geology in Policing & Law Enforcement.** Invited after dinner speaker. Institution of Civil Engineers (ICE), The Geological Society of London (GSL) South Wales Group. Park Plaza Hotel, Cardiff, Thursday 25 November 2010, 21:30-2:30.
24. **An Introduction to Forensic Geology: How may Geologists help the Police to Investigate Crime?** Presentation to Los Angeles Police Department (LAPD), Federal Bureau of Investigation (FBI) & Geoforensics Search International (GSSI). Los Angeles Sheriff's Office, 1800 Paseo Rancho Castilla, Los Angeles California, USA, Friday 5th November 2010, 10:30-11:30.
25. **Proposal for 'A Guide to Forensic Geology'.** 3rd International Soil Forensics Conference 2010, Long Beach Hyatt Regency Hotel, California, USA. Wednesday 5th November 2010, 14:00-14:30.
26. **Geomorphological and Geoforensic Interpretation of Maps, Aerial Imagery, Conditions of Diggability and the Colour Coded RAG Prioritisation System, in Searches for Criminal Burials (in association with the Australian Federal Police).** 3rd International Soil Forensics Conference 2010, Long Beach Hyatt Regency Hotel, California, USA. Wednesday 4th November 2010, 15:30-16:00.

27. **The Staffordshire (Anglo Saxon) Gold Hoard.** Saddleworth Archaeological Trust, Masonic Hall, High Street, Uppermill, Tuesday 27 September 2010, 20:00-21:00.
28. **The role of Geoforensics in Policing & Law Enforcement: How do Geologists help the Police Investigate Crime?** Yorkshire Geological Society & Hull Geological Society. Theme: Modern Techniques in Geology. University of Hull, Geography Department, Cohen Building, Cottingham Road, Saturday 23rd October 2010, 14:00-15:00.
29. **Geoforensic in Law Enforcement.** Keynote Speaker. Earth Science Teachers' Association (ESTA) Conference, 43rd Annual Course and Conference, Department of Geology, University of Leicester, Saturday 18th September 2010, 09:30-10:15.
30. **Geological Techniques in Search.** Presentation to the Namibian/South African Police, Friday 8 October 2010, Windhoek, Namibia, 11:00-12:00.
31. **IUGS-GEM Proposal: 'A Guide to Forensic Geology'.** Working Group on Forensic Geology Geological Survey of Namibia/Ministry of Mines & Energy Tuesday 5 October 2010, Windhoek, Namibia. Breakout Session.
32. **IUGS GEM Forensic Geology Working Group 2009-2010.** Working Group on Forensic Geology Geological Survey of Namibia/Ministry of Mines & Energy Monday 4 October 2010, Windhoek, Namibia Workshops Program A, 11:00-11:30am.
33. **Geoforensic in Law Enforcement.** Keynote Speaker. Earth Science Teachers' Association (ESTA) Conference 43rd Annual Course and Conference Department of Geology, University of Leicester Saturday 18th September 2010, 09:30-10:15.
34. **Introduction to Forensic Geology and the Search for a Buried Homicide Grave?** University of Keele, Department of Geology, Staffordshire, 11 March 2010
35. **Introduction to Forensic Geology and the Search for a Buried Homicide Grave?** Kingston University, Faculty of Science, School of Geography, Geology and the Environment, Kingston-upon-Thames, London, 17 December 2009.
36. **How do Geologists' Help the Police Solve Crime?** Southwest Regional Group of the Geological Society of London, University of Bristol, Department of Geology, 11 March 2009.
37. **How do Geologists' Help the Police Solve Crime?** Southwest Regional Group of the Geological Society of London, University of Bristol, Department of Geology, 11 March 2009.
38. **Establishment of an International Working Group on Forensic Geology.** The International Union of Geological Sciences, Geosciences for Environmental Management, Montevideo, Uruguay, 12 October 2009
39. **How Geologists, Archaeologists & Anthropologists Help the Police Solve Crime.** Saddleworth Archaeological Trust, Masonic Hall, Saddleworth, 27 September 2009.
40. **Using Geology to Assist in the Search for and Understanding of, Buried Human Remains.** International Crime Conference, British Library, London, 15 July 2009.
41. **First Ibero-American Course on Forensic Geology.** Universidad Nacional de Colombia, National Institute of Medical and Legal Geology, Bogota, Colombia, 30 May to 4 April 2009.
42. **The Applications of Geology for the Support of Police Investigations.** Dutch Police, British Geological Survey, Nottingham, 2 June 2009.
43. **Sherlock Homes, Rocks, Soils & Murder.** The Geological Society of London, History of Geology Group, Burlington House, 8 April 2009.
44. **Forensic Geology & Search Techniques.** Greater Manchester Police, Tactical Aid Unit, GMP Clayton Brook Police Station, 4 January 2008.
45. **Forensic Geology & Crime Scene Searches for Missing Persons.** Institute of Criminal Investigations, Department of Geology, University of Porto, Faculty of Geology, Science & Chemistry, Portugal, 12 July 2008.
46. **Homicide Search for an Unmarked Homicide Grave.** University of Tennessee, Department of Forensic Anthropology & The Body Farm (FBI Facility), 4 August 2008.
47. **Forensic Geology and Homicide Search.** University of Tennessee, Department of Forensic Anthropology & The Body Farm, 22 April 2008.

48. **How do Geologists Help the Police Solve Crime?** A Presentation on Forensic Geology. Manchester Museum Public Lecture, Oxford Road, Manchester, 12 May 2008.
49. **The Role of Geoforensics in helping the Police investigate crimes and the launch of 'Geoforensics'.** Queens University Belfast, Department of Geography, 13 March 2009.
50. **Forensic Geology Overview and Cases.** University of Leicester, Department of Geology, March 2007, 2008 & 2009.
51. **How do Geologists' Help the Police Solve Crime?** Leicester University Literacy & Philosophical Society, University of Leicester, 3 October 2007.
52. **Homicide Victim Searching It's a Team Effort.** Soil Forensic International, Edinburgh, 1 November 2007.
53. **The coordinated approach of multidisciplinary teams to locate concealed victims of homicide, developing the role of forensic landscape investigation.** Soil Forensics International, Edinburgh, 30 October 2007.
54. **Geological Techniques to Investigate Crime.** Denver Police Headquarters, Denver, Colorado, USA, 27 October 2007.
55. **How do Geologists' Help the Police Solve Crime?** Northeast Regional Group of the Geological Society of London, ARUP office, Newcastle-upon-Tyne, 20 February 2007.
56. **First Inaugural Meeting of the Geological Society of London Forensic Geoscience Group & Geoscientists at Crime Scenes.** The Geological Society, Burlington House, London, 20 December 2006.
57. **How do Geologists' Help the Police Solve Crime?** Halcrow Group Limited, 31 August 2006.
58. **Geological Methods & Techniques to Search for Missing Objects and Buried Graves.** National Policing Improvements Agency (NPIA), National Crime Organisation Faculty (NCOF), Ministry of Defence and JARIC, Royal Air Force (RAF), Brampton, 27 July 2005.
59. **How do Geologists & Geomorphologists help to solve crimes?** Police Service Northern Ireland and Queens University Belfast, Belfast, 9 December 2005.
60. **Helping the Police with their Inquires.** CENTREX, Harperley Hall, Durham, 24 November 2004.
61. **An Introduction to Forensic Geology and Helping the Police with their Inquires.** Scott Wilson, Chesterfield, Derbyshire, June 2003.
62. **Geological Investigations and the Search of Saddleworth Moor.** Saddleworth Round Table Society, Uppermill, November 2002.
63. **The Moors Murders Search and Forensic Geology.** House of Commons, Westminster Palace, London, 31 March 2002.

#### Forensic geology publications 2002-2012

The following published or publically available information on forensic geology includes; peer reviewed scientific journals, conference proceedings, abstracts, book contributions, magazines, web-site and newspaper articles. This is by no means a complete list of FGG activities and only represents the 'publications by the Chair.

1. Donnelly, L. J. 2011. Use of geology in forensic science: Search to locate burials. Encyclopaedia of Quaternary Science, Elsevier (pending).
2. Donnelly, L. J. 2011. Members of the Geological Society of London Forensic Geoscience Group (FGG) and the International Union of Geological Sciences (IUGS), Initiative on Forensic Geology (IFG) present at the 2011 British Science Festival in Bradford, UK: 'Sherlock Holmes to CSI - how geologists help solve crimes', 13/09/11, 15.30-5.30pm.
3. Donnelly, L. J. 2011. British Science Festival in Bradford. Forensic Geology Question and Answer Session. <http://www.britishscienceassociation.org/web/ScienceinSociety/x-change/x-change+2011.htm>.
4. Donnelly, L. J. 2011. Contributions to the NPIA National Search Advisers document on 'Search & Geoforensics' for publication in The Senior Investigating Officers Handbook (pending).
5. Donnelly, L. J. 2011. The Renaissance in Forensic Geology. Teaching Earth Sciences. Magazine of the Earth Science Teachers' Association (ESTA), 36(1), 46-52.

6. Donnelly, L. J. & Harrison, M. 2010. Geomorphological and Geoforensic Interpretation of Maps, Aerial Imagery, Conditions of Diggability and the Colour Coded RAG Prioritisation System in Searches for Criminal Burials. 3rd International Workshop on Criminal & Environmental Soil Forensics, 2-4 November 2010, Long Beach, California, 10.
7. Donnelly, L. J. & Nodes, D. C. 2010. The Geoforensic International Network. A Dose of Gin for the IUGS. GeoNZ2010, Forensic & Evidential Geology Session, 25 November 2010.
8. Donnelly, L. J. 2010. The role of Geoforensics in Policing & Law Enforcement: How do Geologists help the Police Investigate Crime? Modern Geological Techniques. Yorkshire Geological Society & Hull Geological Society. 23 October 2010, Circular 561, 5.
9. Donnelly, L. J., Ruffell, A. & Rutsika, S. The Forensic Geoscience Group (FGG) and International Union of Geological Sciences. Poster, conference on Forensic Geology, Japan.
10. Donnelly, L. J., Ruffell, A. & Rutsika, S. The Forensic Geoscience Group (FGG) and International Union of Geological Sciences (IUGS) Working Groups on Forensic Geology. Poster, INTERPOL conference, Lyon, France, October 2010
11. Donnelly, L. J. 2010. The Staffordshire (Anglo Saxon) Hoard. Saddleworth Archaeological Trust circular, 27 September 2010.
12. Donnelly, L. J. 2010. Geoforensics in Law Enforcement. Key note lecture. Earth Science Teachers' Association Conference 43rd Annual Course and Conference Department of Geology, University of Leicester Saturday 18th September 2010, 09:30-10:15. University of Leicester. ESTA publication, 17-19 September 2010. 22.
13. Donnelly, L. J. & Harrison M. 2010. Development of Geoforensic Strategy & methodology to Search the Ground for an Unmarked Burial or Concealed Object. Emergency Global Barclay media Limited, July 2010, 30-35.
14. Donnelly, L. J. 2010. The role of geoforensics in policing and law enforcement. Emergency Global Barclay media Limited, January 2010, 19-22.
15. Donnelly, L. J. 2009. International Union of Geological Sciences (IUGS), Commission on Geoscience for Environmental Management (GEM), Geoforensics: A Global Perspective. GEM Newsletter, December 2009, 2-7.
16. Donnelly, L. J. 2009. The importance of effective communication between geoscientists and the police. The Macaulay Institute, GIMI network summary paper. The Macaulay Institute, Aberdeen.
17. Donnelly, L. J. 2009. The geological search for a human grave. The Macaulay Institute, GIMI network summary paper.
18. Donnelly, L. J. 2009. Operation Colombia. Article on UK & USA geoforensic specialist visit to Bogota, Colombia, April 2009. Geoscientist. A. DeWind (reporter), 19(9), September 2009, 6-7
19. Donnelly, L. J. 2009. The Geological Search for s Homicide Grave. The Investigator, July/August 2009, 42-49.
20. Donnelly, L. J. & Ruffell, A. 2009. Using geology to assist in the search for, and understanding of, buried human remains. International Crime Scene Conference, British Library, London, 15-16 July 2009. Abstract.
21. Dawson, L. A., Barclay, D., Donnelly, L. J., Ruffell, A. & Miller, D. Communication in geoscience featuring and example from print media. International Crime Scene Conference, British Library, London, 15-16 July 2009. Abstract.
22. Donnelly, L. J. 2009. A review of international cases of fault reactivation during mining subsidence and fluid abstraction. Quarterly Journal of Engineering Geology & Hydrogeology, 42. 73-94.
23. Donnelly, L. J. 2009. Whatever remains? Geoscientist. The magazine of The Geological Society of London, 19(1), 24-25.
24. Harrison, M. & Donnelly, L. J. 2008. Buried Homicide Victims: Applied geoforensics in search to locate strategies. The Journal of Homicide and Major Incident Investigations. Produced on behalf of the Association of Chief Police Officers (ACPO) Homicide Working Group, by the National Policing Improvement Agency (NPIA).
25. Ruffell, A., Donnelly, L. J., & Murray, R. C. 2008. The Future of Geoforensics, Abstract, GSA meeting Houston, UUSA
26. Donnelly, L. J. 2008: Contribution to article in: Nature. CSI: Geoscience 18 December 2008. [http://blogs.nature.com/news/thegreatbeyond/2008/12/csi\\_geoscience\\_unit.html](http://blogs.nature.com/news/thegreatbeyond/2008/12/csi_geoscience_unit.html)

27. Donnelly, L. J. 2008 (ed). Geoscientific Equipment and Techniques at Crime Scenes. 2nd FGG Meeting of the Geological Society of London, Forensic Geoscience Group. Programme & Abstracts. Burlington House, London, 17 December 2008, 6-7.
28. Donnelly, L. J. 2008. Forensic investigations in engineering geology, mining geology, geomorphology and geohazards. In: Donnelly, L. J. (ed). Geoscientific Equipment and Techniques at Crime Scenes. 2nd FGG Meeting of the Geological Society of London, Forensic Geoscience Group. Programme & Abstracts. Burlington House, London, 17 December 2008, 35.
29. Donnelly, L. J. 2008. The development and significance of a conceptual geological model, in different geomorphological settings, to search, to search for a murder victim's grave: In: Donnelly, L. J. (ed). Geoscientific Equipment and Techniques at Crime Scenes. 2nd FGG Meeting of the Geological Society of London, Forensic Geoscience Group. Programme & Abstracts. Burlington House, London, 17 December 2008, 36-38.
30. Dawson, L., Donnelly, L. J., Miller, D., Cassella, J., Pringle, J., Hollingsworth, K., Ruffell, A., & Harrison, M. 2008. Communication in forensic geoscience featuring an example from TV: In: Donnelly, L. J. (ed). Geoscientific Equipment and Techniques at Crime Scenes. 2nd FGG Meeting of the Geological Society of London, Forensic Geoscience Group. Programme & Abstracts. Burlington House, London, 17 December 2008, 30-31.
31. Ruffell, A., Donnelly, L. J., Dawson, L. 2008. The future of geoforensics: In: Donnelly, L. J. (ed). Geoscientific Equipment and Techniques at Crime Scenes. 2nd FGG Meeting of the Geological Society of London, Forensic Geoscience Group. Programme & Abstracts. Burlington House, London, 17 December 2008, 33.
32. Harrison, M. & Donnelly, L. J. 2008. Locating concealed homicide victims; developing the role of Geoforensics. In: Ritz, K., Dawson, L. & Miller, D. (eds). Criminal and Environmental Soil Forensics. Soil Forensics Springer, 197-219.
33. Donnelly, L. J. 2008. Communication in geology: A personal perspective and lessons from volcanic, mining, exploration, geotechnical, police and geoforensic investigations. In: Liverman D.G.E, Pereira C.P. & Marker B. (eds) Communicating Environmental Geoscience. Geological Society, London, Special Publication, 305, 107-121.
34. Donnelly, L. J. 2008. Contributions to: How can geologists aid the understanding of a crime scene? Police Professional. Investigative Practice Journal, September 25, 2008, 22.
35. Donnelly, L. J. 2008. Contributions to: National Policing Improvement Agency 2009. Body Recovery Briefing Paper. Policing Issues, Scene and Forensic Specialist Considerations. NPIA, Bedfordshire.
36. Donnelly, L. J. 2008. Featured in: Earth Scientists, Police & Popular Crime Writers. Earth Science Ireland. Magazine of the ES2k Group, Issue 3, Spring 2008, 33.
37. Harrison, M. & Donnelly, L. J. 2007. The coordinated approach of multi disciplinary teams to locate concealed victims of homicide, developing the role of forensic landscape investigation. Soil Forensic International, 30 October to 1 November, The Macaulay Institute, Herriot Watt University, Edinburgh, 20.
38. Donnelly, L. J. 2007. The Geological Society of London, Forensic Geoscience Group. Soil Forensic International, 30 October-1 November, The Macaulay Institute, Herriot Watt University, Edinburgh, 42.
39. Donnelly, L. J. 2006. First inaugural meeting of the Geological Society of London, Forensic Geoscience Group. Geoscientists at Crime Scenes. Forensic Geoscience Group Meeting, Geological Society of London, Burlington House, 20 December 2006.
40. Donnelly, L. J. 2005. Considerations for a Geological Society of London Forensic Geology Specialist Group. The Geological Society, London.
41. Fenning, P. J. & Donnelly, L. J. 2004. Geophysical techniques for forensic investigations. In: Pye, K. & Croft, D. (eds) Forensic Geoscience: Principles, Techniques and Applications. Geological Society, London, Special Publications, 232, 11-20.
42. Donnelly, L. J. 2004. Forensic geology; the discovery of spades on Saddleworth Moor. Geology Today, 20 (2), March-April 2004, 42, Blackwell Publishing Limited.
43. Donnelly, L. J. 2003. Spades Clue to moor victim Keith. News of the World, December 24, 2003, p4.
44. Donnelly, L. J. 2003. Spades find give new moors clue. The Sunday Times, December 14, 2003, p 10.
45. Donnelly, L. J. 2003. Spades clue to moors killing. Oldham Evening Chronicle, December 15 2003, p1.
46. Donnelly, L. J. 2003. The applications of forensic geology to help the police solve crimes. European Geologist. Journal of the European Federation of Geologists, December 2003, 16, 8 - 12.

47. Donnelly, L. J. 2002. Forensic Geology (Geoforensics): How do geologists help solve crimes? British Geological Survey Publication & IMC Group Consulting (Report for the Home Office).
48. Donnelly, L. J. 2002. Finding the silent witness: how forensic geology helps solve crimes. All-Party Parliamentary Group for Earth Science. The Geological Society of London, Geoscientist, 12(5), May 2002, 24.
49. Donnelly, L. J. 2002. Finding the silent witness. The Geological Society of London, Geoscientist, 12(5), May 2002, 16-17.
50. Donnelly, L. J. 2002. Experts uncover earth's grim secrets: Geologists Helping to Solve Crime. Nottingham Trent University Newsletter, Grape Vine, April issue 2002.
51. Donnelly, L. J. 2002. Finding the silent witness. British Geological Survey's record of presentation to the House of Commons & House of Lords on 12 March 2002. British Geological Survey.
52. Donnelly, L. J. 2002. How forensic geology helps solve crime. All-Party Parliamentary Group for Earth Science. Westminster Palace, House of Commons, 12 March 2002.
53. Donnelly, L. J. & Humphries R. N. 2002. Geological conservation, benefits for biodiversity. English Nature, Humphries Rowell Associates & International Mining Consultants, February 2002.
54. Donnelly, L. J. 2002. Earthy clues. Geologists can help the police to solve serious crime. The Times, Monday 5th August 2002, page 10, T2.