

Professor Lorna Dawson, CBE, BSc, PhD, CSci, F. I. Soil Sci, FRSE, FRSA, FRSB, FRSGS

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[Soil Forensics - James Hutton Institute](#)

[Professor Lorna Dawson | SEFARI](#)

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Outline

I am a Principal Research Scientist at the James Hutton Institute, Aberdeen, Scotland, UK, where I am Head of the Centre for Forensic Soil Science and Knowledge Exchange lead for Environment and Soils at SEFARI Gateway. I hold the qualifications of BSc (Honours) Geography (Edinburgh University 1979), and PhD in Soil Science (Aberdeen University 1984). I am visiting Professor in Forensic Science at the Robert Gordon University and Professora Auxiliar, Departamento de Ciências, CESPU. I am a Fellow of the British Society of Soil Science, a Chartered Scientist and hold an Expert Witness certificate in both Criminal and Civil Law (Cardiff University, 2011, 2012, updated 2017). I am vetted to NPPV 3 with SC clearance. I was awarded a CBE in the Queen's birthday honours list, June 2018, for my services to soil and forensic science and awarded a Fellow of the Royal Society of Edinburgh (FRSE) in 2019 and awarded Soil Forensic Expert Witness of the Year in the Corporate INTL 2021 Global Awards. I am Chair of the Geological Society of London, Forensic Geology Group, Treasurer of the IUGS Initiative on Forensic Geology, on the committee for ENFSI Animal, Plant, Soil Trace working group and an affiliate member of Organisation of Scientific Areas Committees for Forensic Science OSAC, trace evidence group, USA. I am an invited member of the Forensic Science Regulators non-human DNA Expert Advisory Group and made a Fellow of the Royal Society of Biology, and the Royal Scottish Geographical Society, 2024. I have published widely on the subject of forensic soil science with over 100 refereed publications, books and book chapters. I am a registered Expert Advisor with the National Crime Agency, have worked with numerous police forces in Scotland, England, Wales, Ireland, Brazil, Greece, Portugal, Belize and Australia over the last 20 years and have advised and reported on over 150 cases, written over 100 Expert Witness reports, in the UK and overseas. I have presented evidence in over 20 cases, including: WA v Rayney, Perth, Australia, 2012; R v Davies, North Wales, 2013; HMA v Sinclair, Livingstone, 2014; R v Halliwell, Bristol, 2016; HMA v Willox, Glasgow, 2020, HMA v MacDowell, Inverness, 2022; R v Southwood, Newport, 2023; HMA v Barnes, Edinburgh, 2023; HMA v Packer, Glasgow, 2024 and the [Sheku Bayoh Public Inquiry, Edinburgh, 2022](#). I was awarded the [RSE James Hutton medal for excellence in Earth and Environmental sciences](#) in 2023. I was awarded the Proteomass Scientific Society Award, 2024 and the Fletcher of Saltoun Award, 2024 from the Scotland Saltire Society. I am on the Forensic Science Regulators expert advisory group for the use of non-human DNA in criminal investigations. I am a trained facilitator, regularly teach on university courses, train police forces in crime scene sampling, chair several stakeholder groups, am a [science communicator](#), a STEM Ambassador, and regularly contribute to crime novels and [award winning films](#), television such as [BBC 1 Expert Witness](#), [David Wilson's Crime](#) files, [BBC Murder Case](#) and speak at public events such as [Bloody Scotland](#), [University Challenge](#) and the [RI Christmas Lecture 2023](#) on forensic science. I provided written evidence in the House of Lords inquiry into Forensic Science in 2019 and oral evidence to the Westminster inquiry into Forensic Science in September 2023.

Qualifications

BSc (Hons) Geography, Edinburgh University (1979)

PhD Soil Science, Aberdeen University (1984)

Expert Witness Certificate Criminal law, Cardiff University (2011)

Expert Witness Certificate Civil law, Cardiff University (2012)

Masterclass in Expert Report Writing, Bond Solon (2017)

Chartered Scientist (2010 to present)

Science Communications Master Class, University of the West of England (2011)

Chartered Management Institute Certificate, SCQF Level 6 Diploma in First Line Management (2019)

Expert Witness, Scots law, Bond Solon, Aberdeen University (2021)

Selected Recent Relevant Funding

- 2006 to present: Lead Forensic Reporter and Expert Witness in soil within Criminal and Civil Law. Case work & Operations. Aleto Forensic Services, Cellmark Forensic Services, Key Forensic Services, Police Scotland, South Wales police, Gwent police, the Metropolitan police, defence agencies, lawyers, Public Inquiries.
- 2024 to 2027: Contributor to AMAST network working on AMR. UKRI.
- 2024 to 2026: Co PI. UKRI. Lead on KE. (SCAnDi) Single-cell and single molecule analysis for DNA identification.
- 2024 to 2029: Co PI. ERC. Synergy-Plague. Lead PI Stenseth, Oslo University, Norway.
- 2014 to 2028: Co supervisor. PhD. LJMU. Development of an environmental forensic toolkit to support crime investigations within Sites of Special Scientific Interest (SSSIs) across the UK.
- 2024 to 2028: 2011 to present: Treasurer and Co PI. IUGS- IFG. International training and development in forensic geoscience.
- 2021-2026: National Audit Office. Review of Metal Mines in England and Wales.
- 2020-2026: National Audit Office. Review of Foot & Mouth disease disposal sites.
- 2019-2024: Macaulay Development Trust. PhD. Plastic distribution in Scottish soils. Awarded July 2024
- 2019-2024: Portugal. PhD. Human decomposition in Portuguese cemeteries. Awarded June 2024.
- 2017-2020: SoilTracker. Forensic Soil Sampling and Analysis in the Danish legal system. Denmark.
- 2013-2015: EU FW 7. Scientific Lead and Co PI. (MiSAFE). Development and testing microbial tools for use in case work. 11
- 2009-2011: NERC. Co PI. Tools for the characterisation of organic soil and peat.
- 2007-2009: EPSRC. Lead. Engineering and Physical Sciences Research Council. Integration of Soil Fingerprinting techniques for forensic applications (SoilFit).
- 2007-2008: ESR. Co PI. Potential use and limitation of multiple biological analysis methods for soil in physical evidence.
- 2006-2009: EPSRC. Lead. Engineering and Physical Sciences Research Council. Geoforensics and information management for crime investigation (GIMI).

Selected Recent Refereed Publications and Reports

Louise Dawney, Helen Tidy, Katherine Brown, Lorna Dawson, Iain Macaulay & Nick Dawney (2025) PedaLEGOgy – Using LEGO® crime scenes as an inclusive way to ‘build’ student learning, engagement and educational experience in forensic science. [Science & Justice](#). Available online 26 October 2025, 101347 [PedaLEGOgy – Using LEGO® crime scenes as an inclusive way to ‘build’ student learning, engagement and educational experience in forensic science - ScienceDirect](#)

Silva-Bessa, A., Ramage, S., Ferreira, M.T., Dinis-Oliveira, R., Forbes, S.L., & Dawson, L.A. (2025) Exploring human hair degradation: A preliminary study for estimating time-since-death. *International Journal of Legal Medicine*. Online Available from: <https://doi.org/10.1007/s00414-025-03476-4>

Ramage, S., Coull, M., Cooper, P., Campbell, C., Prabhu, R., Yates, K., Dawson, L., Devalla, S and Pagaling, E. (2025) Microplastics in agricultural soils following sewage sludge applications: Evidence from a 25-year study. *Chemosphere*. 9 March 2025. DOI:[10.1016/j.chemosphere.2025.144277](https://doi.org/10.1016/j.chemosphere.2025.144277)