

Current Position:	Assistant Consultant with Air Quality Consultants Ltd.
Year of Birth:	1990
Nationality:	British
Qualifications:	MSci Chemistry with Study in Continental Europe (2012) PhD Aerosol Science (2016)

Key Experience:

Since joining Air Quality Consultants in September 2016, Frances has gained experience in the assessment of air quality impacts for a range of residential and commercial projects using qualitative and quantitative methods, including dispersion modelling using ADMS 5 and ADMS-Roads. She has also completed BREEAM assessments for commercial projects and gained experience in undertaking construction dust risk assessments and Air Quality Neutral assessments.

Prior to joining Air Quality Consultants, Frances spent four years conducting scientific research on atmospheric aerosols in the Bristol Aerosol Research Centre at the University of Bristol. The third year of Frances' undergraduate degree involved spending one year studying chemistry at the University of Salamanca in Spain.

Employment Record:

2016 – Current	Assistant Consultant, Air Quality Consultants Ltd. Responsible for providing support for air quality monitoring, modelling and assessment for a range of clients.
2012 – 2016	Postgraduate Research at the University of Bristol. Research involved studying the physical properties and chemical reactivity of single aerosol particles. Single particles of atmospheric aerosol surrogates were trapped and manipulated using aerosol optical tweezers and characterised using Raman spectroscopy. Author of several peer-reviewed scientific papers as well as experience presenting results orally at international conferences.

Residential and Commercial Developments:

Air Quality Assessment of a Housing Development, Hillingdon (2016)

Responsible for the preparation of an air quality assessment of a proposed residential development in the London Borough of Hillingdon. Included compiling, running and analysing data for the ADMS Roads and AMDS-5 models, assessment of construction dust and undertaking an Air Quality Neutral assessment.

Air Quality Assessment of a Mixed-use Development, Brent (2016)

Responsible for the preparation of an air quality assessment of a proposed hotel/residential development in the London Borough of Brent. Involved qualitatively analysing the air quality impacts on new residents, and also carrying out construction dust and Air Quality Neutral assessments.

Air Quality Assessment of a Stadium Stand Renovation, Barnet (2016)

Responsible for the preparation of an air quality assessment of a proposed stadium stand renovation at Allianz Park in the London Borough of Barnet. Involved carrying out construction dust and Air Quality Neutral assessments.

Air Quality Assessment of a New School Building, Harrow (2016)

Contributed to the preparation of an air quality assessment for a proposed new building within a school in the London Borough of Harrow. Involved compiling, running and analysing data for the ADMS-5 model, as well as an Air Quality Neutral assessment.

BREEAM Assessments:

BREEAM Assessment for a New Office and Workshop Building, Chorley (2016)

Responsible for work for BREEAM credit within the Health and Wellbeing section of the BREEAM 2014 scheme document on Indoor Air Quality Plan for an office/workshop building.

BREEAM Assessment for a New Reception Building, Leeds (2016)

Responsible for work for BREEAM credit within the Health and Wellbeing section of the BREEAM 2011 scheme document on Indoor Air Quality Plan for a new reception building.

Construction Dust Assessments:

Construction Dust Assessment of a Residential Development, Camden (2016)

Responsible for carrying out a construction dust assessment on a proposed residential development in the London Borough of Camden.

Miscellaneous:

PhD Thesis (2016)

Influence of Aerosol Physical State on Mass Transfer and Heterogeneous Oxidation Kinetics. Submitted to the University of Bristol.

Academic Papers (2012-2016)

Diffusion and reactivity in ultraviscous aerosol and the correlation with particle viscosity, Chemical Science, 2015, 6, 4876-4883.

Volatility and oxidative ageing of aqueous maleic acid aerosol droplets and the dependence on relative humidity, Journal of Physical Chemistry A, 2014, 118, 5680-5691.

Measurements of the sensitivity of aerosol hygroscopicity and the kappa parameter to the O/C ratio, Journal of Physical Chemistry A, 2013, 117(51), 14120-14131.

International Conference Presentations (2014-2015)

Presentations to international audiences including at the International Aerosol Conference (Busan, South Korea) and European Aerosol Conference (Milan, Italy).