

STATEMENT OF EXPERTISE

This Environmental Statement (ES) has been prepared by competent experts, and the following statement outlines the relevant expertise and qualifications of the EIA Co-ordination team and the lead authors of each technical chapter.

Environmental Impact Assessment Co-ordination

The ES has been prepared and the EIA co-ordinated by Sarah Smith BSc (Hons) PGCert MSc, Principal Environmental Consultant at Wardell Armstrong LLP. Sarah has a BSc (Hons) in Geography from Lancaster University, a Post Graduate Certificate in Sustainable Business Management and an MSc in Environmental Sustainability and Green Technology from Keele University. Sarah has over eight years' experience of co-ordinating EIAs and preparing Environmental Statements for a range of developments, including mixed-use / residential, renewable energy and waste projects. Sarah is also a member of the Institute of Environmental Management and Assessment (IEMA).

The co-ordination of the EIA has been overseen by Lauren Williamson, BSc (Hons) MSc MRTPI, Associate Director at Wardell Armstrong LLP. Lauren has a BSc (Hons) in Natural Sciences from the University of Manchester and an MSc in Planning from the University of Manchester. Lauren has extensive experience in the co-ordination of EIAs and the preparation of Environmental Statements for a range of developments.

The Environmental Statement has been reviewed by Alison Mitchell, BSc MSc CEnv MEnv.Sc MIOA, Technical Director and Planning and EIA Service Lead at Wardell Armstrong LLP. Alison has over 30 years' experience in the industry and has been responsible for the management and successful delivery of numerous EIAs.

Wardell Armstrong LLP is a registrant of the IEMA EIA Quality Mark, demonstrating commitment to excellence in EIA activities. Sarah, Lauren and Alison support the management of Wardell Armstrong's registration to the EIA Quality Mark, ensuring the high standard of the scheme is adhered to.

Traffic and Transport

The Traffic and Transport Chapter has been prepared by Peter Evans, Jason Collins, and Tom Giles, all of WSP UK Ltd. Peter is a Director, and holds a PgDip TP, PgDip Mgmt, PRINCE 2 and is a Chartered Member of the Royal Town Planning Institute and a Chartered Member of the Institute of Logistics and Transport with over 30 years' experience within the industry. Jason is an Associate Director and holds a BSc (Hons), MSc (Eng), PRINCE 2 project management TPP. Jason is a Member of Chartered Institute of Highways and Transport and has 17 years' experience within the industry. Tom is a Senior Transport Planner, and holds a BSc Hons (Univ. of London) in Geography. He is a Member of the Chartered Institute of Highways and Transportation (MCIHT) and has six years of experience as a Transport Planner.

Water Resources

The Water Resources Chapter has been prepared by Bethan Joule, BSc (Hons), MSc, GradCIWEM, Environmental Scientist at Wardell Armstrong LLP. Bethan has over two years' experience in working in an environmental and engineering consultancy producing Water Resources ES Chapters for a range of projects including mixed use and housing, landfills, and quarries, and the production of Water Framework Directive Assessments.

This chapter has been reviewed by Dr Craig Speed, BSc (Hons) PhD, fellow of the Geological Society and Associate Director at Wardell Armstrong LLP, with over 15 years' experience in the EIA process including working on nationally significant infrastructure projects and undertaking assessments for regionally and locally important EIAs and Water Framework Directive Assessments.

The chapter has been approved by Lauren Ballarini, MSc, BSc (Hons), CGeol, Service Lead in Hydrogeology and Hydrology, with over 17 years' experience in hydrogeology undertaking EIA in support of a variety of regionally and locally important projects including housing and commercial development.

Ground Conditions

The Ground Conditions Chapter has been prepared by Tim Wilkinson who has 19 years of geotechnical and geo-environmental experience. Tim is a Chartered Geologist who holds a BSc (Hons) degree in Geology from The University of Liverpool (2000) and an MSc in Applied Environmental Geology from Cardiff University (2002). Tim is a Fellow of the Geological Society of London. Tim has supervised the Ground Conditions and Geology & Soils environmental impact assessments for several commercial, residential and infrastructure developments.

Biodiversity

The Biodiversity Chapter has been prepared by Stephen Moore BSc (Hons, 2:1) who has worked with environmental consultancies for the last nine years, the previous three of which, with Phlorum Ltd. During university, Stephen carried out a year's work of ecology in New Zealand before graduating and starting his professional environmental career in the UK where he began monitoring aquatic ecology in 2012. As a senior field scientist, Stephen was involved with several large-scale projects including the ongoing multi-million-pound Asset Management Plans (AMPs) with Welsh Water, pesticides in waterbodies with Natural Resources Wales (NRW) and further ecological work with water companies and governmental bodies. Stephen has continued his career in ecology with Phlorum as an environmental consultant where has continued to conduct surveys and produce reports for protected species and proposed development across the UK. Stephen has carried out work with clients including Savills, Wilmott Dixon, St. Modwen, local councils and has experience in EciAs and extensive ecology report packs.

Air Quality

The Air Quality Chapter has been prepared by Dr Paul Sanderson, Senior Environmental Scientist at Wardell Armstrong LLP. Paul is a PhD qualified Air Quality Specialist and Member of The Institution of Environmental Sciences who has been involved in large complex EIA schemes as well as smaller individual commissions as part of planning applications. Paul has advanced knowledge of air quality modelling and monitoring techniques, ensuring competency when carrying out this type of technical assessment.

Noise and Vibration

The Noise and Vibration Chapter has been prepared by Rosie Pitt and Simon Urquhart.

Rosie Pitt is a Principal Environmental Engineer with over 10 years of experience in acoustics and preparation of noise and vibration assessments. Rosie has a postgraduate diploma in Acoustics and Noise Control and is a full member of the Institute of Acoustics.

Simon Urquhart is a Technical Director with over 20 years of experience in acoustics and preparation of noise and vibration assessments. Simon has a postgraduate diploma in Acoustics and Noise Control and is a full member of the Institute of Acoustics.

Cultural Heritage

The Cultural Heritage Chapter has been prepared by Dr Susan Stratton (Desk based Officer) who has seven years of commercial archaeological experience ranging from large excavations through to desk-based reporting. She gained a BA in Archaeology from the University of Bristol in 2007, in 2009 she returned to university to study a MA in the European Neolithic at Cardiff University, where she continued to do her PhD. Susan has supervised on academic and student training excavations in the UK and abroad, including the Stonehenge Riverside Project and Cardiff University excavations in Serbia and Montenegro. Susan joined the Archaeology Wales team in 2016 and has recently focussed on desk-based reporting and the built heritage.

Socio-economics

The Socio-economics Chapter has been prepared by Senior Consultant Maria Vitale and Consultant Michael Kapetanakis. Both consultants work in Arup's Economics West team.

Maria has a broad range of consulting experience helping clients to deliver value and strategic objectives through their projects and programmes, with particular experience in developing business cases and assessments which take into consideration socioeconomic, wellbeing and cultural dynamics of places. She has particular interest in the socio economic impacts of investment and policy. Maria also has subject matter expertise in social value definition and delivery. Maria has 9 years of consulting experience and a Master's degree in City Design and Social Science from the London School of Economics and Political Science as well as a bachelor's degree in Business Administration from the University of Michigan.

Michael is a multilingual economist with cross-sectoral experience and an integrated perspective that is valuable in developing economic development strategies and projects. He has an academic background in urban economic development strategies, public policy and geography, having graduated from the Bartlett's Development Planning Unit with a master's degree in Urban Economic Development. Prior to joining Arup, Michael worked in both the financial and the non-profit sectors.

Health

The Health Chapter has been prepared by Senior Consultant Rowena Ekermawi and Consultant Zuzana Kupcikova who are both part of Arup.

Rowena is a senior consultant within the Environment team at Arup who leads on environmental impact assessment projects across a range of sectors and consenting regimes. She is also a health impact assessments practitioner and applies various health considerations to the projects she works on. Her work is primarily in England and Wales but she has also worked in the Middle East. She is a Chartered Environmentalist with 16 years' experience in the field and works on a range of assessments including strategic, sustainability and social impact assessments.

Zuzana is a consultant within the Environment team at Arup who specialises in health assessment. She has worked on a range of health impact assessments across the United Kingdom including the British Library, Chinese Embassy and North London Heat and Power Project. Prior to joining Arup, she studied Biology at the University of Edinburgh and went on to pursue a Master of Public Health at Imperial College London. She has an interest in the methodology of health assessment and its connection and interrelation to other topics within environmental assessment.

Townscape and Visual Amenity

The Townscape and Visual Amenity Chapter has been prepared by Katharine Schofield, an Associate Director within Wardell Armstrong LLP. Katharine holds a BSc (Dual Hons) in Landscape Design & Ecology and a Postgraduate Diploma in Landscape Architecture from the University of Sheffield, and a Postgraduate Certificate in Environmental Management. Katharine is a Chartered Landscape Architect (CMLI), a Fellow of the Landscape Institute (FLI) and a Practitioner Member of the IEMA. Katharine has been practicing in landscape architecture for over fifteen years and has been Chartered since 2011. Katharine is highly experienced in LVIA and TVIA, strategic landscape and green infrastructure design, masterplanning and landscape management for a wide range of development types including both EIA and non-EIA schemes in England and Wales, and has prepared and presented expert evidence at planning appeals.



Climate Change

The Climate Change Chapter has been prepared by Sarah Hodson, Senior Climate Change Consultant at Wardell Armstrong LLP. Sarah holds a BSc (Hons) degree in Physical Geography and an MSc Degree in Sustainable Development (Climate Change and Environment) and has over 10 years' experience working within the energy, water and construction industries, as well as for both national and local government. Sarah has experience of corporate carbon accounting and sustainability reporting for UK companies and overseas operations, has undertaken Climate Change Impact Assessments for a range of sites and development types in the UK, plus Whole Lifecycle Analysis (to assess the impacts of embodied carbon emissions).

The Climate Change chapter was reviewed by Paul Evans Bsc (Hons), CEnv, MEI, Service Area Director for Energy & Climate Change at Wardell Armstrong LLP. Paul is a Chartered Environmentalist with the Energy Institute, has over seventeen years' experience working exclusively within the fields of renewable energy and climate change, and has been involved in innovative and unique projects. Paul has completed numerous EIAs for a wide variety of national and international projects and has developed energy strategies for large-scale housing developments across the UK.

Materials and Waste

The Materials and Waste Chapter has been prepared by James Benn. James is an environmental consultant with experience specialising in waste management service support for local authority and private sector clients. James is a Chartered Waste Manager and also sits on CIWM's Midland Centre Council. James is a practitioner member of IEMA. James has a track record of delivering both planning and permitting support to a wide range of clients to include private waste contractors, over 35 UK local authorities, local government waste partnerships, Defra, DECC, WRAP and international government departments.

The Chapter has been reviewed by Ali Kemp, a Technical Director in the Waste and Resources Team and a Practitioner Member of IEMA and Member of CIWM. Ali is a highly experienced technical specialist in waste and resource management strategy, EIA and planning support, site waste management plans, infrastructure procurement and implementation. Ali works for public and private sector clients, often on large, complex projects, and has recent experience of delivering waste management support to a number of residential and commercial property developers. Ali is therefore well placed to deliver a well-structured and presented Assessment efficiently and in line with the client, IEMA and ultimately the planning authority requirements.

The team is also engaged in a range of projects reviewing waste management strategies, advising on treatment technologies, waste minimisation options appraisals, recycling performance optimisation, development models that align with a circular economy approach, and sustainable procurement. This enables them to draw on this wider experience in the Chapter drafting, and also to feed into the overall development design process, later in the

project, helping to ensure that consideration is given to creating a deliverable and sustainable solution that optimises waste management opportunity.

Wind Microclimate

The Wind Microclimate Chapter has been prepared by Giulia Matteoni (PhD CEng MIMechE). Giulia is a wind and microclimate specialist with eight years of experience in the delivery of major developments projects across the UK and internationally.

Since joining Arup in 2013, Giulia has worked within the Specialist Technology and Research practice on management and execution of wind engineering and microclimate projects. She has developed particular expertise in planning and organisation of wind tunnel testing and Computational Fluid Dynamics (CFD) studies aimed at evaluation of pedestrian wind comfort and safety; preparation of technical chapters for planning applications including Environmental Impact Assessments (EIA) and engagement with planning authorities.

Selected project examples include: Central Square, Cardiff; 50 Fenchurch Street, 40 Leadenhall Street, 6-8 Bishopsgate, Portland House, 1 Museum Street, London; Paradise Circus, Birmingham.

Daylight, Sunlight and Overshadow

The Daylight, Sunlight and Overshadow Chapter has been prepared by Dimple Rana, Senior Engineer (CEng, MCIBSE). Dimple has 10 years' experience working in building and environmental physics. She specialises in microclimate projects which includes daylight and sunlight, thermal comfort and wind. She has worked on range of commercial and technical projects and is experienced in using analysis tool and techniques including sunlight daylight and overshadowing, solar analysis, climate modelling and computational fluid dynamics.

Mutlu Ucuncu, Associate (CEng, MIMechE). Mutlu has over 15 years' experience specializing in numerical analyses including solar analysis, fluid dynamics and heat transfer related engineering applications. He uses advanced modelling and analytical techniques to help delivering better performing engineering designs. His main interests are in building physics and microclimate analysis and design. Mutlu has been leading numerous projects on a broad range of topics, such as reflected solar glare assessments, stadium cooling design and microclimate analysis and design of outdoor spaces.

Steve Walker, Associate Director (CEng, MIET). Steve has over 25 years of engineering experience including leading a team of specialist engineers in daylighting, building physics, microclimate, CFD, fluid dynamics and climate change. His own areas of specialist knowledge include daylighting and electric lighting, microclimate design, building envelope thermal and daylight optimization, computer simulation of vision and the design of daylight and electric lighting systems, particularly in sensitive environments such as museums and in integrated design tools. He has worked on a wide range of international projects including commercial offices, museums, airports, masterplans including EIA work and other project types.