

High Speed Rail (Crewe – Manchester)

Supplementary Environmental Statement 1 and
Additional Provision 1 Environmental Statement

Competency statement

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1 Overview of the SES1 and AP1 ES delivery structure

- 1.1.1 The High Speed Rail (Crewe – Manchester) Supplementary Environmental Statement (SES1) and the Additional Provision Environmental Statement (AP1 ES) submitted to Parliament in support of the High Speed Rail (Crewe – Manchester) Bill in July 2022, has been prepared by a team of competent experts.
- 1.1.2 The team comprised HS2 Ltd technical specialists together with experts drawn from leading consultancies who have extensive experience in the production of Environmental Impact Assessments (EIAs) for a range of major infrastructure developments including high speed railways. The individual experts can demonstrate their competence through degree level qualifications, membership of relevant professional institutes and practical experience in undertaking EIAs.
- 1.1.3 The consultancy support to carry out and report the EIA was structured into two teams, an ‘Environmental Overview Consultant’ (EOC) team and a ‘Civils Design and Environmental Services (CDES) team.
- 1.1.4 The EOC team was responsible for setting out the scope and methodology of the assessment, the technical guidance to ensure a consistent assessment, the form of reporting, the collation and assurance of the ES and the assessment of topics which have route-wide effects such as climate change and waste material and resources. The EOC was managed by the Arup+ consortium.
- 1.1.5 The CDES team was responsible for the assessment of effects on a geographic basis.
- 1.1.6 The assessment of the SES1 and AP1 ES was managed by the MWJV consortium and covered the following community areas:
 - MA01 Hough to Walley’s Green;
 - MA02 Wimboldsley to Lostock Gralam;
 - MA03 Pickmere to Agden and Hulseheath;
 - MA04 Broomedge to Glazebrook; and
 - MA05 Risley to Bamfurlong.

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- 1.1.7 Changes to the design and construction assumptions and environmental baseline information for the remaining community areas and off-route works will be reported in a separate, future SES (referred to as SES2) and AP ES (referred to as AP2 ES).
- 1.1.8 The following sections outline the consultancy teams, their qualifications and membership of relevant professional institutes.
- 1.1.9 This information is provided in support of the statements set out in Volume 1 of the SES1 and AP1 ES.

2 Environmental Overview Consultancy team

2.1.1 The EOC team included an EIA management team, technical lead authors/managers for each Volume of the ES, and technical lead authors for each environmental topic which the EIA addresses. Table 1 outlines the team, their qualifications and membership of relevant professional institutes.

Table 1: Qualifications and professional memberships of the EOC team

| Discipline | Discipline Lead's Qualifications and Membership of Professional Institute |
|-------------------------------------|---|
| EIA management | |
| EOC Project Director | BA (hons), MSc, MIEMA, Chartered Environmentalist, Registered IEMA Environmental Auditor |
| Cross-AP Project Manager | BSc Environmental Science, University of Nottingham (2005-2008). MSc Environmental Assessment and Management, Oxford Brookes University. Chartered Environmentalist (CEnv). Member of the Institute of Environmental Management and Assessment (IEMA). |
| Cross-AP Technical Lead | Bachelor of Engineering (BEng Hons). Chartered Environmentalist (CEnv). Member of the Institution of Environmental Sciences (MIEnvSci). |
| Advisory Team | MA (Hons) Town Planning, Heriot-Watt University and Edinburgh College of Art. Fellow of the Institute of Environmental Management and Assessment (FIEMA). IEMA Principal Environmental Impact Assessment Practitioner. IEMA Associate Environmental Auditor. Member of the Institution of Environmental Sciences (MIEnvSci). Chartered Town Planner. Member of the Royal Town Planning Institute (MRTPI). Chartered Environmentalist (CEnv). |
| Lead author (Non-technical summary) | BSc (Hons) Environmental Sciences, The University of East Anglia. MSc Environmental Assessment and Management, The University of East Anglia. Practitioner Member of the Institute of Environmental Management and Assessment (PIEMA) |
| Lead author (Volume 1) | BSc (Hons) Environmental Sciences, The University of East Anglia. MSc Environmental Assessment and Management, The University of East Anglia. Practitioner Member of the Institute of Environmental Management and Assessment (PIEMA). |
| Lead manager (Volume 2) | BSc (Hons) Environmental Health, American University of Beirut. |

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| Discipline | Discipline Lead's Qualifications and Membership of Professional Institute |
|---|---|
| | <p>MSc Environmental Technology, Imperial College London. PhD Environmental Sciences, Imperial College London. Member of the Institute of Environmental Management and Assessment.</p> |
| Lead author (Volume 3) | <p>BSc (Hons) Marine biology and oceanography, University of Plymouth. MSc Environmental Consultancy, University of Plymouth. Practitioner Member of the Institute of Environmental Management and Assessment (PIEMA).</p> |
| Lead manager (Volume 5 and background information and data) | <p>MA (Hons) Town Planning, Heriot Watt University, Edinburgh. MSc Environmental Assessment and Management, Oxford Brookes University, Oxford. Chartered Member of the Royal Town Planning Institute (MRTPI). Practitioner Member of the Institute of Environmental Management and Assessment (PIEMA).</p> |
| Technical author | |
| Topic leads manager | <p>BA (Hons) Urban Studies and Planning, University of Sheffield. Postgraduate Diploma in Town and Regional Planning, University of Sheffield. Cities Masters 'Urban Power and Influence' Boston University. Chartered Town Planner. Member of the Royal Town Planning Institute (MRTPI).</p> |
| Agriculture, forestry and soils | <p>BSc (Hons) Geography, Aberystwyth. PgCE Education, Cambridge. Fellow of the British Institute of Agricultural Consultants. Chartered Environmentalist. Member of the Institution of Agricultural Engineers. Practitioner Member of the Institute of Environmental Management and Assessment. Associate of the Institute of Environmental Management and Assessment. Member of the Institute for Apprenticeship's Agriculture, Environment and Animal Care Route Panel.</p> |
| Air quality | <p>BEng (Hons) Communication and Control PhD Air pollution modelling and neural networks Member of the IET (Institute of Engineering and Technology) Member of Environment Industries Commission: Air Quality and Noise Working Group Member of the Aviation Group Executive Board of the US Transportation Research Board (AV000). Chair of the US Transportation Research Board International Aviation Committee. Member of the US Transportation Research Board Committee on Environmental Impacts of Aviation, AV030.</p> |
| Greenhouse gases | <p>BSc (Hons) in Environmental Science. MSc Environmental Management and Technology. Chartered Environmentalist (CEnv). Associate Member of the Institute of Environmental Management Assessment (IEMA).</p> |

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| Discipline | Discipline Lead's Qualifications and Membership of Professional Institute |
|--|---|
| | Life Cycle Assessment Practitioner. |
| Climate change (adaptation and resilience) | MSc Environmental Management, University of Nottingham. BSc (Hons) Geography, University of Bristol. Certificate in Strategic Environmental Assessment, Oxford Brookes University. Member of the Chartered Institution of Water and Environmental Management (MCIWEM). Chartered Water and Environmental Manager (C.WEM). Chartered Environmentalist (CEnv). |
| Community | BSc (Hons) Regional Science (Economics and Human Geography). Postgraduate Diploma in Town and Regional Planning and Master of Civic Design. Member of the Royal Town Planning Institute. Professional Certificate in Management. |
| Ecology and biodiversity | BSc (Hons) Biological Sciences. Master of Philosophy (MPhil), Houbara Bustard in Fuereventura, Canary Islands. Chartered Environmentalist. Full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). Chartered Environmentalist. |
| Electromagnetic interference | BSc Electronic and Electrical Engineering. Chartered Engineer. Member of the Institution of Engineering and Technology. |
| Health | BSc (Hons) Environmental Conservation and Management. PG Dip Environmental Monitoring and Assessment. Chartered Environmentalist (CEnv). Full Member of Institute of Environmental Management and Assessment (IEMA). |
| Historic environment | BSc (Hons) Heritage Conservation. Full Member Chartered Institute for Archaeologists. |
| Land quality | BSc (Hons) Geology, Cardiff University. MSc Geochemistry, University of Leeds. Fellow the British Geological Society. Member of the Institution of Environmental Sciences. Associate Member of the Institution of Environmental Management and Assessment (IEMA), accredited auditor. Chartered Geologist. Chartership Scrutineer for the Geological Society. |
| Landscape and visual | Bachelor of Landscape Architecture. BA (Hons) Landscape Architecture. Chartered Member of the Landscape Institute (CMLI). |
| Major accidents and disasters | MEng Civil Engineering (2.i), Imperial College. PhD in Earthquake Hazard and Risk, Imperial College. Chartered Engineer (CEng). |

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| Discipline | Discipline Lead's Qualifications and Membership of Professional Institute |
|--------------------------------|---|
| Socio-economics | BSc (Hons) Economics. MSc Economics. Diploma in Transport. Chartered Member of the Institute of Logistics and Transport. Member of the Institute of Economic Development. Member Regional Studies Association. |
| Sound, noise and vibration | BEng (Hons) Engineering Acoustics and Vibration. Chartered Engineer (CEng). Member of the Institute of Acoustics (MIOA). |
| Town Planning | BA (Hons) Urban Studies and Planning, University of Sheffield. Postgraduate Diploma in Town and Regional Planning, University of Sheffield. Cities Masters 'Urban Power and Influence' Boston University. Chartered Town Planner. Member of the Royal Town Planning Institute (MRTPI). |
| Traffic and transport | BA (Hons), Geography, University of Sheffield. Chartered Member of the Institute of Logistics and Transport. Member of the Chartered Institute of Highways and Transportation. Member of the Transport Planning Society. |
| Waste and material resources | MEng Civil and Environmental Engineering Masters, Imperial College London Chartered Environmentalist (CEnv) with Society for the Environment (SocEnv) Chartered Member of the Chartered Institution of Waste Management (CIWM) |
| Water resources and flood risk | BSc (Hons) Earth Science. MSc Hydrogeology - Groundwater resources, pollution and management. Fellow of the Geological Society of London. Chartered Geologist (C.Geol). European Geologist (Eur.Geol). Member International Association of Hydrogeologists (IAH). |

3 Civils Design and Environmental Services Consultancy team

3.1.1 The CDES team that prepared the documents was led by an EIA management team and technical authors. Table 2 outlines the team, their qualifications and membership of relevant professional institutes.

Table 2: Qualifications and professional memberships of the MWJV CDES team

| Discipline | Discipline Lead's Qualifications and Membership of Professional Institute |
|--|---|
| EIA management | |
| Technical Manager | BSc (Hons) Rural Environmental Studies, University of London. Chartered Member Landscape Institute. Principal EIA Assessor IEMA. |
| EIA Manager | BSc (Hons) Environmental Science, University of East Anglia. MSc Environmental Impact Assessment, Auditing and Management Systems, University of East Anglia. |
| ES Lead Author | BSc Transport Management and Planning, Loughborough University of Science and Technology. Chartered Member of the Royal Town Planning Institute. |
| Technical author | |
| Agriculture, forestry and soils | BSc (Hons) Combined Sciences (Biology and Geography), Brighton Polytechnic. MSc Landscape Ecology, Design and Management, University of London. Follow of the British Society of Soil Science (F.I.SoilSci). Chartered Scientist (CSci). |
| Farm Holdings | BSc (Hons) Agriculture, University of Reading. Fellow of the British Institute of Agricultural Consultant (FBIAC). |
| Air quality | BSc (Hons) Environmental Science, University of Leeds. Member of the Institution of Environmental Sciences. Member of Institute of Air Quality Management. |
| Climate change (adaptation and resilience) | BSc Physics with Astrophysics, University of Leeds. MSc Sustainable Energy Futures, Imperial College London. CIWEM Climate Change Network Panellist. Certified CEEQUAL Assessor. |
| Community | BSc (Hons) Geography, University of Sussex. MSc Environmental Assessment, University of Brighton. Associate Member of Institute of Environmental Management and Assessment (IEMA). |
| Ecology and biodiversity | BSc (Hons) Ecology, University of Stirling. Postgraduate Certificate in Environmental Technology, University of Leicester. PhD (Ecology), University of Sheffield. |
| Electromagnetic interference | BEng (Hons) Electrical Engineering, University of Liverpool. |

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| Discipline | Discipline Lead's Qualifications and Membership of Professional Institute |
|------------------------------------|---|
| | <p>MSc (Eng) (by research), "Optical Fibre Acoustic Monitoring of Partial Discharges in Gas Insulated Substations", University of Liverpool. PhD "Acousto-optic Monitoring of Electrical Power Equipment Using Chromatic Signal Processing", University of Liverpool. Chartered Engineer (CEng). Member of the Institution of Engineering Technology.</p> |
| Health | <p>BSc (Hons) Geography, University of Sussex. MSc Environmental Assessment, University of Brighton. Associate Member of Institute of Environmental Management and Assessment (IEMA).</p> |
| Historic environment | <p>BA Ancient History and Archaeology, University of Birmingham. MA Practical Archaeology, University of Birmingham. MCIFA Member Chartered Institute for Archaeologists.</p> |
| Land quality (MA01, 02, 03 and 06) | <p>BSc Physical Geography, Cheltenham & Gloucestershire College. MSc Engineering Geology, University of Portsmouth. Fellow of the Geological Society of London (FGS). Member of the Institution of Environmental Sciences (MIEnvSc). Chartered Environmentalist (CEnv). Specialist in Land Condition (SiLC). National Quality Mark Scheme for Land Contamination Management, Suitably Qualified Person (SQP).</p> |
| Land quality (MA05) | <p>BSc (Hons) Applied Geophysics and Engineering Geology, University of Exeter. MSc Water Pollution Control Technology, Cranfield Institute of Technology (now Cranfield University). Member of the Chartered Institution of Water and Environmental Management (CIWEM). Chartered Engineer (CEng). Chartered Environmentalist (CEnv). Qualified Person (CL:AIRE Code of Practice).</p> |
| Landscape and visual | <p>BSc Landscape design and plant sciences, Sheffield University (1986). MA Landscape design, Sheffield University. PgDip Environmental Management, University of London. Chartered Member of the Landscape Institute.</p> |
| Major accidents and disasters | <p>BSC (Hons) Environmental Science, The University of Birmingham. MSC Environmental Management, The University of Nottingham. NEBOSH National General Certificate in Occupational Health and Safety. Full Member of the Institute of Environmental Management and Assessment (MIEMA). Chartered Environmentalist (CEnv). Technical Member of the Institute of Occupational Safety and Health (Tech IOSH).</p> |
| Planning | <p>BSc in Property Economics, DIT Bolton Street, Dublin, Ireland. MSc in Urban and Regional Planning, Heriot Watt University, Edinburgh. MSc in Urban and Rural Design, Queens University, Belfast. Chartered Member of the Royal Town Planning Institute.</p> |

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| Discipline | Discipline Lead's Qualifications and Membership of Professional Institute |
|--------------------------------|--|
| | Project Management Qualification, Association of Project Managers. |
| Socio-economics | BSc Geography, Loughborough University. MSc Environmental Monitoring for Management, Loughborough University. Practitioner Member of Institute of Environmental Management and Assessment (PIEMA). Chartered Geographer (CGeog) and Follow of the Royal Geographical Society (FRGS). |
| Sound, noise and vibration | BA Hons Degree, Environmental Management (BA Hons). Post Graduate Diploma, Acoustics and Noise Control (PG Dip) Chartered Scientist (CSci). Member of the Institute of Acoustics (MIOA). Member of the Institute of Environmental Sciences (MIEnvSci). |
| Sound, noise and vibration | BSc (Hons) Physics, Imperial College London. MSc in Acoustics, University of Surrey. Member of the Institute of Acoustics (MIOA). |
| Traffic and transport | Meng (Hons) Civil Engineering, Imperial College, University of London. Member of the Chartered Institute of Highways and Transportation. |
| Waste and material resources | Meng, Civil and Environmental Engineering. MCIWM, Chartered Waste Manager. CEnv, Chartered Environmentalist. |
| Water resources and flood risk | MEng (Hons) Chemical Engineering. MSc Hydrogeology. Member of the Chartered Institution of Water and Environmental Management (CIWEM). Chartered Water and Environment Manager (C.WEM). Chartered Environmentalist (C.Env). Member of the International Association of Hydrogeologists (IAH). |