



Selected Project Experience

Air Quality Impact Assessments

- Assessment of the impacts on air quality from two large proposed **road construction projects** – M1 Junction 19 and the Mersey Gateway. Both assessments required an assessment of the impacts from construction related traffic (NO_x, PM₁₀ and nuisance dust), as well as the impact from road traffic following completion of the proposed projects. Both assessments also followed the **Transport Appraisal Guidance (TAG)** with respect local and regional air quality, as well as the change in exposure before and after completion of the proposed projects.
- Preparation of an air quality impact assessment for the proposed development of a **154 unit residential development** on two sites on Bradford Road, Birmingham. This assessment involved examination of the site locations in relation to traffic flows and existing pollutant concentrations in the area with the aim of supporting the Planning Application. For the prediction of pollutant concentrations in the vicinity of the proposed development, the dispersion model **ADMS Roads** was used.
- Preparation of an air quality assessment based on the potential impacts of local traffic emissions on a **proposed housing development** in Wallsend, Newcastle upon Tyne. The development proposals were for the construction of 118 residential units together with 136 allocated residential parking bays and 82 garages on an existing industrial brownfield and warehousing site.
- Assessment of NO_x, PM₁₀, SO₂, CO, H₂S and VOCs from a **proposed ethylene plant** along the east coast of Saudi Arabia. Predicted ground level concentrations were derived using **AERMOD** (accounting for two proposed operating scenarios) and compared against relevant air quality standards published by the Royal Commission of Saudi Arabia.
- Provided an assessment of air quality at a site of a **proposed residential development** in Ruislip, London. Site is located within and **Air Quality Management Area**. Use of **DMRB** screening method demonstrated that air quality (NO_x and particles) complied with air quality objectives, detailed modelling was not required and that poor air quality was not an obstacle to the proposed development.
- Provided an assessment of air quality at a site of a **proposed residential development** near Kettering. Use of **DMRB** screening method demonstrated that air quality (NO_x and particles) complied with air quality objectives and that poor air quality was not an obstacle to the proposed development.

- An air quality assessment based on the potential impacts of local traffic emissions on a **proposed housing development** along Wragby Road, Lincoln, Lincolnshire. Using the **DMRB**, predicted concentrations of five key pollutants were determined for 2005 and 2010.
- Assessment of air quality at a site of a **proposed residential development within an AQMA** in the London Borough of Southwark. **Potential impacts from construction and development generated traffic, together with existing and proposed traffic flows**. Use of **DMRB** screening method demonstrated that the contribution of the development to air pollution (NO_x and particles) in the AQMA was not significant.
- Assessment of air quality at a site of a **proposed residential development near an AQMA** in the Swansea. Potential impacts from construction and development generated traffic, together with existing and proposed traffic flows were assessed. Use of **DMRB** screening method demonstrated that air quality (NO_x and particles) complied with air quality objectives and that the impact on existing and proposed receptors was not significant.
- Assessment of air quality at a site of a **proposed residential development** on land immediately southeast of the intersection of Grovehill Road and Hull Road, Beverley. The assessment involved the identification of sources of monitoring information on existing pollutant concentrations in the area, review of the Local Air Quality Review & Assessment reports produced by the East Riding of Yorkshire Council (ERYC), interpretation of traffic flows on surrounding roads in relation to site location, and identification of potential construction-related impacts.
- Preparation of an air quality impact assessment for continued **quarrying activities** at an established quarry near Cromwell, Nottinghamshire. The assessment formed part of the environmental statement in support of the planning application for the proposal.
- Responsible for preparing a **dust impact assessment** providing information in support of an application to amend Direction No DIR/01/2002 for Wright's Pit East Landfill to enable the deposition of bottom ash from the Waste to Energy Plant. A qualitative dust impact assessment was required assessing the potential impacts on air quality due to the deposition of bottom ash within the landfill.
- Responsible for preparing an air quality impact assessment for a **proposed integrated waste management facility** near Kingston upon Hull. The assessment included the impacts of dust, odour and bio-aerosols from the site.
- Responsible for the preparation of air quality impact assessments for existing and proposed **LFG Utilisation plants** (flares and engines) for both planning applications and assessment of whether proposed plant constitutes a 'substantial change' as defined under PPC legislation and for PPC applications as a whole.
- Responsible for assessing risk associated with the **generation and emission of landfill gas form landfill sites**. Included assessment of sub-surface migration, atmospheric dispersion of LFG and LFG combustion products and assessing human exposure to pollutants associated with landfill site. An extensive knowledge of **GasSim** has been acquired by undertaking these assessments.

Air Quality Monitoring:

- Completed a comprehensive **review of the air quality monitoring network** operated by Newry and Mourne District Council (including continuous analysers and diffusion tubes). The review assisted the Council in formulating an ongoing budget to account for the purchase/replacement of instruments in order to provide adequate network coverage, value for money and environmental justice.
- **Calibration and servicing of ambient air monitoring sites** for public (e.g. Grantham District Council) and private clients (e.g. Corporation of London, Hanson Building Products). Data collection, processing and reporting of monitoring results was also undertaken. As project manager, responsible for cooperating with clients, site auditors and other contractors, such that data capture, interpretation and reporting is maintained to a high standard.
- Depositional measurements of **sugar dust** in the vicinity of Tate & Lyle's sugar refinery in east London. Monitoring was undertaken using Frisbee gauges and black adhesive strips. Deposited dust samples were analysed for a range of sugars e.g. fructose, glucose.
- **Monitoring for deposited dust** (using Frisbee gauges and adhesive strips) in proximity to the Kirkby Thore landfill site, Cumbria. Quarterly dust monitoring reports were produced for comparison against air quality criteria for dust annoyance.
- Responsible for overseeing **engine and flare emissions monitoring** at Southleigh Forest Landfill, undertaken by REC Ltd. Project involved summarising data for comparison with draft EA emission limits for submission to the client.
- Undertook **dust deposition monitoring** over three months at a residential development in Swansea. Monitoring was aimed at establishing baseline conditions at the site prior to the commencement of a proposed residential development of the brown field site.

Local Air Quality Management

- **Further Assessment** of NO₂ (and PM₁₀) concentrations in the vicinity of road sources in order to provide the local authority with an opportunity to supplement the information gathered in the Detailed Assessment and confirm whether the AQMA's are still required or if the original AQMA's needed to be refined (increased or reduced).
- Completion of an **Updating and Screening Assessment (USA)** which provided an update with respect to the attainment of the Air Quality Strategy objectives in accordance with LAQM Technical Guidance LAQM.TG(03) within East Northamptonshire Council's administrative area since the previous USA was completed in 2003.
- Completed an **air quality Action Plan** for Warwick District Council as part of their ongoing commitment to improving air quality following the declaration of two Air Quality Management Areas (AQMA's).