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# Jacqueline McHugh

Senior Geo-Environmental Engineer

## Qualifications

CEng, CEnv, MCIWEM (2007)

MSc Urbanwater and Environmental Management (2001)

BSc (Hons) 2:1 Environmental Technology (2000)

HNC Civil Engineering University of Abertay Dundee (1995)

Full clean UK driving licence since 2001

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## Profile

An experienced Geo-environmental Engineer with over eight years experience in providing technical and project management of both geo-environmental site investigation, waste management related projects and remediation for regeneration projects in the UK and Republic of Ireland.

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## Key Experience

- Site experience as Engineer's Representative on site investigation projects for motorway schemes, housing developments, pipelines and smaller SI projects. Substantial experience as a Construction Quality Assurance (CQA) engineer for the construction of landfill sites and as Engineer's Representative on various remediation projects.
  - Working with developers and liaising with regulatory and statutory authorities to enable the discharge of contaminated land stipulations and flood risk stipulations at the planning application stage.
  - Office based experience includes preparation of contract documents for remediation and waste management projects, specifications, BOQ, Phase 1 and Phase 2 geo-environmental reports, geo-technical interpretive reports and CQA reports.
  - Project management of environmental and geo-technical investigation and flood risk assessments.
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## Project Experience

### **Bristol International Airport Western Walkway Development**

Engineer responsible for the collation of ground condition data to inform the foundation design process of a two storey steel framed walkway along the apron at Bristol Airport. I managed the site investigation works from tender stage to reporting. I co-ordinated the works which involved contractors from three disciplines including geophysics. My role included design of the ground investigation and preparation of the interpretation report. This required me to liaise with the wider design team and I worked closely with structural engineers to meet their design requirements and also managed the financial aspect of the project and client liaison for my section of the works. Post intrusive investigation I prepared the earthworks specification for the final foundation solution which was a retained earth structure.

### **London Development Agency Lower Lee Valley Regeneration**

Worked as part of a multi-discipline team compiling level 1 reports for the handover of geotechnical site summary interpretations for various construction zones. Assisted in the compilation of site specific strategic remediation strategy for construction zone 4.

### **Crest Nicholson, Dursley Bymacks**

**Redevelopment** - Project Engineer responsible for the provision of a remediation strategy to treat a historic hydrocarbon spill, which had resulted in soil contamination. Throughout the later stages of the project, responsible for the project management of the work and liaising with the client, EA, LA and the NHBC.

Preliminary duties included a literature review of the Phase 1 and 2 reports and associated soil and

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groundwater chemical analysis. Site duties included implementing and executing a groundwater and surface water sampling strategy to provide the Environment Agency with data that confirmed the contamination was not a risk to controlled waters. My work then involved the supervision of the “dig and dump” remediation phase, recovery of samples for validation testing, and the production of a remediation validation report for approval by the local authority. Due to the potential ground gas source from the Made Ground, additional duties included the production of a ground gas risk assessment in accordance with Approved Document C and provided a specification to the NHBC for protection measures against ground gas for all affected proposed buildings.

**Tegral Concrete Products, Ballylynan Landfill Cap Construction** – Acted as CQA Engineer for the construction of a capping system for a landfill that accepted inert and non-biodegradable asbestos. The cap construction comprised an impermeable clays and other works associated with this included construction of surface water attenuation scheme that discharged to attenuation cells.

**Welsh Assembly, A40 Widening Scheme Pyscodlyn Farm to the Lamb and Flag Public House** - Project management of a multi-disciplinary team for the provision of a Flood consequence assessment for the Welsh Assembly in accordance with TAN 15. Duties included management of financial, quality assurance and technical aspects of the project.

**LDA, Lower Lea Valley - Olympic Park Development Scheme** - A large scale development in both a geotechnical and contaminated land capacity. Assisted in the compilation of site specific remediation reports and produced a number of level 1 geotechnical interpretative reports.

**NIE, Coolkeeragh and Power Station West Demolition Feasibility Study** - Preparation of a demolition feasibility report including a review of relevant legislation, provision of outline cost estimates for the demolition works, a programme of works and outline remediation strategy. The report

was produced in accordance with the requirements of BS6187: The Code of Practice for Demolition and the CIRIA: Remedial Treatment for Contaminated Land Volume II, Decommissioning, Decontamination and Demolition.

**BNFL, Calder Landfill Extension Segregated Area** - Substantial period of time spent seconded to BNFL as a CQA Engineer for construction of a putrescible waste landfill at their Sellafield Site. Project involved the construction of 3 landfill cells with composite liner and surface water and leachate drainage system. Duties on site included answering technical queries, ensuring adherence to the current health and safety legislation and the construction specification, and CQA responsibilities.

**National Grid, Former Gasholder Station Lydney, Remediation Options Appraisal and Outline Remediation Strategy** - Provision of a remediation options appraisal and outline remediation strategy. This work was done in accordance with the requirements the Environment Agency and DEFRA’s Model Procedures for the Management of Contaminated Land, Contaminated Land Report 11.

**Viridor Waste Management, Lackford Landfill CQA** - The project entailed the construction of a piggy back landfill cell for Viridor Waste Management. Duties included supervision of installation of gas collection system, construction of composite cell liner, leak detection survey and capping of adjacent cells and compilation of the CQA report for EA. Practical experience of New Engineering Contract and Specification for Highway works.

**National Grid, Former Gasholder Station, Long Eaton, Risk Management Plan** - This was undertaken in accordance with National Grid Property Holdings specification for the production of a risk management plan and the requirements of ISO 14001. The report summarised environmental aspects of the site and detailed the legislative requirements and environmental impacts of the site in its current state. A management plan for the site was provided that considered site constraints in relation to current use and during any possible

remediation works. Site hazard plans and remediation cost estimates were also provided.

**Sunderland City council, Sunderland Central Route, Ground Investigation**

**Resident Engineer** - on site during the Phase 2 Investigation. Responsibilities included liaising with landowners and tenants to gain access to certain areas of the route for investigation purposes. Review of the interim and final measurements in accordance with the method of measurement and certified payment and supervision of the site works.

**Crest Nicholson, Penarth Site Investigation -**

Duties included project/contract set up, co-ordinating other team members, provision of a phase 1 report, scoping of the Ground Investigation for geotechnical and contamination purposes, training and supervision of a graduate to undertake site supervision, scheduling of geotechnical and contamination testing, liaising with the Contractor, Client and local authority and the provision of an interpretative geotechnical and contamination report.

**Barton Hill Redevelopment - Project Manager \**  
Engineer responsible for the preparation of the fee proposal and brief for the project and management of the project. Responsibilities also included executing a trial pitting exercise to provide additional data for the remediation strategy, visually assessing bearing capacity of ground, undertaking a SNIFFER risk assessment by utilisation of Arsenic PBET results, liaising with the local Environmental Health Officer and provision of a remediation statement for approval by the EHO.

**RAF Welford and Fairford POL,**

**Decommissioning and Construction** - Duties included the compilation of D20 specifications, remediation strategies, designers risk assessments and environmental risk assessments for the decommissioning of fuel dispensing stations at these RAF sites.

**Cuprinol Ltd, Re-Development of Cuprinol Factory Site, Frome -**

Project Manager's representative in accordance with the New Engineering Contract. Duties included supervision of

site activities (remediation, contaminated soil disposal and earthworks) assessment of method statements and review of geotechnical and remediation validation reports.

**Glasgow City Council, M74 Completion Project -**  
Duties included supervision of drilling and trial pitting and scheduling of contamination testing. Major emphasis was given on site to the health and safety due to presence of chromium, hydrocarbons and asbestos along the proposed route and proximity to residential areas.

**Enniskillen Sewerage Pipeline Project**

This involved the investigation of sites along the line of the proposed pipeline to assess contamination issues and to determine the geotechnical properties of the soil. Duties included the production of the desk study, supervision of site investigation, assessment of contamination results, and review of Tendering Contractors health and safety plan.

**Scottish Executive, A80 Auchenkilns Junction Upgrade -**

Project Geotechnical Engineer for the works comprising boreholes, trial pits, CPT testing, SPT testing, instrumentation installation, in-situ testing methods, laboratory test scheduling, compilation of ground investigation contract document using ICE Conditions of Contract for Ground Investigation, MCHW ground investigation specification and method of measurement.

**Aberdeenshire Council, Crows Nest Landfill Site Ground Investigation -**

The works comprised the ground investigation of a proposed composting plant within an operating landfill site. Duties included assistance with the investigation which comprised cable percussive drilled boreholes with installations, trial pits, falling head permeability tests and contamination testing to comply with PPC regulations.

**Scottish Executive, M80 Stepps Hags Extension**

- Project Engineer responsible for the production of the desk study and designing the ground investigation to determine the location of mine-workings and potential contaminated land areas.

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**Alcan, Kinlochleven Smelter Remediation -**

Project Assistance Residential Engineer supervising the remediation of heavily contaminated industrial site and large-scale earthworks. Duties on site included topographic survey, sampling, laboratory test scheduling, reviewing method statements, trial pitting, site and contract related administration, preparation of contamination factual reports and client/contractor liaison.

**Kilmarnock Flood Prevention Scheme - Project**

Engineer responsible for the design of the ground investigation, site supervision and scheduling of tests, production of the interpretative report and communications with the Contractor with regards to health and safety and waste management issues. The site investigation comprising cable percussive drilled boreholes with installations and trial pits along an historically industrialised river bank. The aim of the investigation was to determine the potential risk that residual contaminants in the Made Ground posed to the design, construction process, groundwater and health and safety of site users during and post construction.

References available on request