

PROJECT CURRICULUM VITAE

Name. Duncan Robert Wardrop.

Date of Birth. 03 August 1953

Profession. Chartered Geologist and Chartered Engineer.

Total years of experience. 48

Nationality. British

Key Qualifications

Headed the UK national geology and exploration teams in Redland Aggregates and subsequently Lafarge. Responsible for identifying new resources for sand/gravel and crushed rock operations in the UK and 12 other countries. Board reporting.

Quarry design and reserves calculation. Geological and quarry design elements of Environmental Impact Assessments. Coordination of outsourced expert teams. Environmental monitoring. Due Diligence for company acquisitions. Public Inquiries and Court actions.

Education

University of London. 1972 – 1975. B.Sc (Hons) Geology.

1975 Fellow of the Geological Society

Member of the Institution of Materials Metallurgy and Mining

Chartered Geologist

Chartered Scientist

Chartered Engineer

In-company courses – Project Management, Finance, Negotiating Skills, Slope Stability, Site Investigation, Expert Witness, Dispute Resolution.

Experience Record

George Stow Ltd, Henley on Thames, Oxfordshire, UK - seconded to George Stow (Nigeria).
Waterwell drillers and water engineers.

1975 Geophysicist. Northern Nigeria. Exploration for groundwater resources and selection of sites for borehole drilling.

1976 Project Manager. Whole country. Managing borehole drilling and water engineering projects. Village supplies and commercial and industrial operations. Civil engineering projects and pipelines.

1977 Acting General Manager, Kano, Nigeria. Coordinating company activity in between permanent appointees. 80 expatriates and 800 local personnel.

NEC Gas Ltd, Kilwinning, Ayrshire, Scotland. North Sea.

1978 Data Engineer. Oil drilling monitoring and sampling. Gas monitoring and blowout prevention.

1979 Deputy Crew Chief, Heather Alpha platform. Computerised drilling monitoring and real time client reporting.

Redland Aggregates Ltd, Hertfordshire, UK

1979 Company Surveyor/Geologist. England and Wales. Exploration for sand and gravel resources. Management of Survey and Drawing office team.

1980 Company Geologist. England and Wales. Exploration for sand and gravel resources. Water resource licensing. Tanzania project as above.

1981 Nyankali, Tanzania. Successfully resolving quality problems in new high profile rock quarry. Sole responsibility for technical report working to Deputy MD as project leader.

1983 Dean, Cornwall. New planning project for high profile coastal quarry acquired through multi-site acquisition. Project Manager and lead on quarry design.

1987 Kyleakin, Isle of Skye, Scotland. Investigation and acquisition of coastal sand/gravel quarry including Hydrographic survey. Manager of geology and design team, member of EIA team.

1988 Givet, N France. Limestone quarry, rail and canal connected, with perceived short life due to inadequate previous core drilling project. New drilling and quarry redesign. Project Manager.

1988 – 1990 Rodel, Isle of Harris, Scotland. Investigation and design of potential large coastal rock quarry, including armourstone production and causeway construction. Manager of geology and design team including external experts. Witness at subsequent Public Inquiry.

1989 Divisional Geologist. Scotland, England, Wales, France, Spain, Norway. Growth of the Redland company in France by acquisitions. Grew from 1 site to 8th largest in country.

1991 Mountsorrel, Leicester, UK. Design and planning application for major extension to 7 million Tonnes per annum flagship granite quarry. Joint Project Manager.

1992 France. Led a French Due Diligence team for the hostile acquisition of the Steetley Group.

1993 Norway. Due Diligence on Espevik coastal quarry and others. Sole responsibility.

1993 Spain. Asset revaluation of the Steetley Iberia company in Spain.

Regular visits to Norway to assess potential coastal quarries to supply the UK.

2000 Mineral Resources Manager. Lafarge Aggregates. UK. As above plus member of a European Aggregates group looking at Lafarge mineral supply strategy in NW Europe. Due Diligences with a coastal quarry focus.

2001 Divisional Mineral Resources Manager. UK. Systematic inspection of Norwegian coastal resources both greenfield and operating. Identification of preferred acquisition target company.

2003 National Exploration and Mineral Resources Manager. UK. Widened responsibility with management of digital drawing office and external survey providers. National strategy work including ports and coastal supply assessments.

2005 Due Diligence team for £14+ million negotiated acquisition of Minimix in South Wales. Subsequent development project for the limestone quarry included.

Re-visit Oslo and Bergen area coastal quarries with Lafarge European team.

2006 Conceived and commissioned a study into Scottish rail connected quarries in order to identify potential acquisition targets able to supply into England by rail.

2007 Led company team for major Public Inquiry into a historic groundwater pollution situation. Subsequently managed implementation of measures imposed on the company. Ongoing.

2007 Start of concept development of next extension to Mountsorrel quarry in Leicestershire. Led design team including external specialists to arrive at final option for planning application. Consent eventually granted.

2007 Northfleet, Kent. Identified necessity to prevent sale of Northfleet Wharf by another Lafarge company – this being one of the 4 deepest rail connected wharves on the Thames with bulk import capability. Subsequently managed the design of a bulk import terminal and led the Lafarge Aggregates members of the planning application team. Planning consent secured.

2007 Bremanger, Norway. Assessment of both greenfield sites and existing coastal operations as potential suppliers to the UK and Northern Europe especially Poland. Clear targets identified.

2008 Sultanate of Oman. Assessment for Lafarge Oman concrete company of potential to acquire local sand and gravel businesses for possible vertical integration of concrete production.

- Brief reconnaissance visit to Duqm area to consider potential rock resources for supporting a possible expansion of Duqm port.

2008 Gdansk, Poland. Visit to port to identify suitable import wharf for both dredged sand and gravel reception and Norwegian stone if acquisition (above) successful.

2008 Ispas, Ukraine. Site investigation and assessment of a major greenfield sand/gravel resource. Subsequent quarry design and working scheme with Lafarge Ukraine colleagues. Site brought into operation.

2008 Sweden. Commissioned a report into potential Swedish coastal quarries able to supply the UK. Low potential and no further action.

2008 Kazakhstan. Assessment of potential acquisition of major limestone operation with cement feedstock and aggregates potential.

2008 Estonia. Visit and assessment of potential underground granite mine, and export potential at Tallin port.

2010 Whitwell, Derbyshire, UK. Witness at Public Inquiry into limestone quarry development. Successful decision.

2010 Russia (UK office based). On multinational Due Diligence team for a major company acquisition in Russia. Successful acquisition.

2011 UK. Start of national asset assessment to support the merger of Tarmac and Lafarge Aggregates in the UK. Subsequent negotiations on integration processes and corporate structure in respect of the in-house professional services.

2011 Represented Lafarge in Westminster based group interfacing with UK Government on environmental legislation. Presented papers and a speech.

2012 UK. On the defence team for a large civil suit launched by a third party for alleged pollution.

2012 UK. Creation of an asset divestment portfolio required to allow the Lafarge – Tarmac merger.

2012 Thrislington, Durham, UK. Start of a major development project for an extension to a large rail connected chemical limestone operation including a complete reassessment of the site geochemistry.

2012 Whitwell, Derbyshire, UK. Development project including potential railway diversion in large chemical limestone operation including a complete reassessment of the site geochemistry.

2012 UK. On the team producing the entry valuation for the Lafarge Tarmac merged company.

**Wardrop Minerals Management Ltd, Ashwell, Hertfordshire, UK.
2013 Principal.**

2013 Dowlow, Buxton, Derbyshire, UK. Conceived and managed an investigation into the limestone quality at depth in a major limestone quarry divested by Lafarge. A residual requirement arising from the Lafarge Tarmac JV and requiring the managing of the interests of 3 companies.

2013 Hertfordshire. Coordinating external specialists in several contaminated ground investigations related to a major potential housing development. Member of the overall project steering team. Ongoing.

2014 Chairman of the Mineral Products Association Water Group. Representing the industry to Government in respect of emerging water legislation. Interfaces with Members of Parliament and the Climate Change Adaptation Committee. Ongoing.

2014 Republic of Ireland. Expert Witness in a legal action related to quarry material supply. Ongoing.

2014 UK. Member of Due Diligence team on behalf of a bidder for Lafarge Tarmac – required to be divested as a result of a Lafarge-Holcim global merger. Client was the successful bidder.

2015. UK. Strategic overview for client on potential supply of aggregates from French near-coastal quarries to the UK.

2015. UK. Contracted to provide Secretariat to a product group within the Mineral Products Association trade body.

2015. Advised a solar farm developer on the significance of third party mineral rights.

2015. Assisted Tarmac with technical coordination of external consultants in respect of a permitted Strategic Rail Freight Interchange.

2015. UK. Assisted a client company in implementing a quarry water management process.

2016. Conducted a prospects evaluation exercise for a national aggregates producer.

2016. Managed a drilling investigation, trial blast and sampling programme in the Irish quarry subject of the dispute as per 2014 appointment.

2016. Undertook a site water mapping project across a number of Tarmac operations.

2017. Advised a solar farm developer on the significance of third party mineral rights including iron ore mining rights.

2017. Drew up an evidence report for potential Court proceedings in Ireland.

2017. Reported on potential mineral sterilisation implications of housing proposals for 3 clients.

2017. Conducted prospects evaluation exercises in three UK counties.

2017. Essex. Conducted a desk study on potential for mineral sterilisation due to a proposed housing development.

2017. Reviewed a draft report from an external consultant on water legislation risk to Tarmac.

2017. Hampshire. Conducted a desk study mineral resources assessment prior to a factory car park development.

2017. Drafted submission letter to Committee on Climate Change via House of Lords.

2018. Solar farm mineral rights at Weldon, Northamptonshire.

2018. Advice on Chalk surface for a Hertfordshire Public Inquiry.

2018. Produce reconnaissance drilling plan for large Cumbrian S&G prospect.

2018. Final defective materials evidence report for Irish lawyers.

2018. Consultation on next Remediation Notice at Sandridge, Hertfordshire. Negotiated into a Voluntary Remediation Statement.

2019. Essex. Drilling investigation for mineral assessment in support of planning application for housing.

2019. Kent. Drilling investigation for mineral assessment in support of planning application for housing.

2019. Representation of client at a Westminster political liaison organisation especially in regard to water legislation, climate change and the impacts on business.

2020. Derbyshire, UK. Advised a solar farm developer on the significance of third party mineral rights.

2020. Developed a list of prospective new mineral sites for a 1 quarry aggregates company based in Lincolnshire.

2021. Oxfordshire. Initial opinion on the mineral sterilisation aspects of a housing proposal using a client site investigation report.

2021. Hertfordshire. Prepared a Mineral Assessment Report for a planning authority in respect of a proposed industrial site development.

2022. UK. Drafted planning Mineral Assessment Reports for proposed housing planning applications on 4 sites in 4 counties for different clients.

2022. Scotland. Designed and implemented a hard rock drilling investigation on a former opencast coal site.