

SAND & GRAVEL

Reference: CS-24

GWP has significant experience in the evaluation, design and development of sand and gravel operations, providing services to leading mineral operators in the UK.

GWP provides geological, geotechnical and ground and surface water services to many of the leading sand and gravel producers in the UK. Expertise in engineering surveying, geotechnics, mineral resource and reserve assessment, ground water and surface water management and risk assessments allows a coherent and integrated approach to design and scheduling of mineral operations from initial site investigations through preparation of planning applications, mineral operations and after-use. GWP provides specialist advice on the impacts of mineral operations and subsequent after-use on complex surface and groundwater systems with a successful track record in presenting proposals to the MPA, Environment Agency and other organisations.

Projects have included co-development and after-use including inert and non-inert landfilling, built development and restoration for environmental enhancement. GWP works closely with other leading experts in planning, landscape and ecology.

Our Services include:

Evaluation and design:

- 3D ground surveys using GPS and laser scanning systems
- Geological, groundwater and surface water investigations
- Resource and reserve evaluation
- Excavation layout, phasing and restoration design
- Design of water treatment and discharge arrangements
- Feasibility assessments
- After-use design
- 3D visualisations and 'fly throughs'.

Planning:

- Preparation of Planning Application documents and Environmental Impact Assessments (minerals, design, water, geotechnics) in association with other relevant specialists.
- Waste management licences
- Consultations in relevant areas with Government Agencies and Planning authorities, environmental agencies, public interest groups.
- Provision of Expert Witness support in minerals, geotechnics and water, including planning appeals, public enquiries and litigation.
- ROMP Reviews
- Mineral sterilisation assessments
- Flood risk assessments



Operations and afteruse:

- Geotechnical support
- Groundwater and surface water – water treatment, de-watering, remediation, mitigation, abstraction and discharge licenses
- Design of attenuation ponds and settlement lagoons
- Silt management
- Compliance with statutory regulations -
 - UK Mines and Quarries Regulations 1999 (Geotechnical Assessments)
 - EU Mine Waste Directive (Extractive Minerals Management Statement EMMS)
- Planning Conditions
- Environmental Permits in relevant areas of water and geotechnics
- Excavation and stockpile surveys
- Excavation and tipping rules
- Geotechnical face worker training
- Survey, engineering design, volumetrics, quality control and construction supervision of geological and artificial liners and caps for inert and non-inert landfill sites in former aggregate excavations.
- Environmental permitting for landfilling.



Selected projects

- Preparation of Environmental Permits (EP) and Hydrogeological and stability risk assessment for inert landfilling in major sand and gravel operation in the London Area.
- De-watering impact mitigation assessment of existing major sand and gravel operation in the Thames Valley.
- Expert Witness support for a major aggregate producer in the UK in litigation relating to recoverable sand and gravel reserves.
- Groundwater impact assessment of a proposed Terrace Gravel pit and inert landfill planning application
- Statutory Geotechnical appraisals and risk assessments for sand and gravel operations for major producers in the UK.
- Review of the distribution, properties and uses of silica sand in Kent and Surrey for MPA.
- Design, phasing and after-use design for new 'greenfield' sand and gravel operations in Southern England including site investigation, resource evaluation, hydrogeological and hydrological environmental impact assessment.
- De-watering aspects of environmental impact assessments for proposed sand and gravel sites in the upper Thames Gravel aquifer

Key contacts

For details and to discuss your requirements, please contact the following:

Jeremy Baldock, cEng, FGS. E-mail: JeremyB@gwp.uk.com