A list of projects for **Geotechnical Investigations** includes:

- *United Kingdom: M1 and M62 Motor way Interchange SI and Foundations Report, Royal Portbury Docks SI and Foundations Report, Salisbury A36 Bypass SI and Structure Foundation Design, Plymouth Shell Oil Refinery, Oxford A40 By Pass Geotechnical Investigations, M4-Bryn Glas Relief Road Scheme Geotechnical Investigations, Hinkley Point 'C' Nuclear Power Station Site Investigations and Foundation Design, North Devon Link Road (IIB) SI, Fawley B Power Station Marine Hydrographic and Geophysical Surveys, Fawley B Power Station Offshore Site Investigation, Mablethorpe Pipe Trench Marine Geotechnical Investigations.*
- Australia: North West Shelf Project Geophysical and Marine Geotechnical Investigations, Port Headland Harbour Extension Geophysical and Marine Geotechnical Investigations
- *Tunisia Zarzis Harbour Extension Development Marine Geotechnical Investigations*
- *Bahrain Bahrain Causeway Marine Geotechnical Investigations*
- *Lebanon Beirut Harbour Deepening Dredging Report*
- *Nigeria Lagos Water Supply Study, Well Testing and Hydrological Investigations*
- *Yemen: Wadi Rasyan Well Testing and Hydrological Investigations.*

Antonio Associates

4 Berrow Road Burnham-on-Sea Somerset TA8 2ET United Kingdom
telephone: +44 (0)1278 764000 / 786787
facsimile: +44 (0)1278 764004 / 795577
e-mail: edward.antonio@ukonline.co.uk

Registered in England number 3537680

Land and Marine Geotechnical Investigations

Ground investigation projects are required to provide detailed and quantitative information. Investigations must be specifically designed for the project and aim to provide the necessary information for design both efficiently and with an appropriate precision. Special field and laboratory testing may be required.

Investigations may require:

- *accurate borehole logging to international standards,*
- *in situ testing of soil and rocks (CPT, PMT, PBT, density probe and geophysical well-logging),*
- *rock and soil laboratory testing,*
- *foundation design,*
- *interpretative and or factual and reporting.*

The design and control of large scale investigations are a significant area of experience. Projects completed include on shore sites (for highways, bridges and power stations) and offshore (for dredging, harbours, quay walls, pipelines, offloading facilities).

These systems include ship, seabed and jack-up-based systems for rotary drilling, sampling, in situ testing, vibrocore and for hydrographic and geophysical surveys.

Other specialist areas include investigation contracts and claims, hydrological and well pumping studies, industrial site redevelopment and waste management projects for geotechnical aspects of fill liner design.

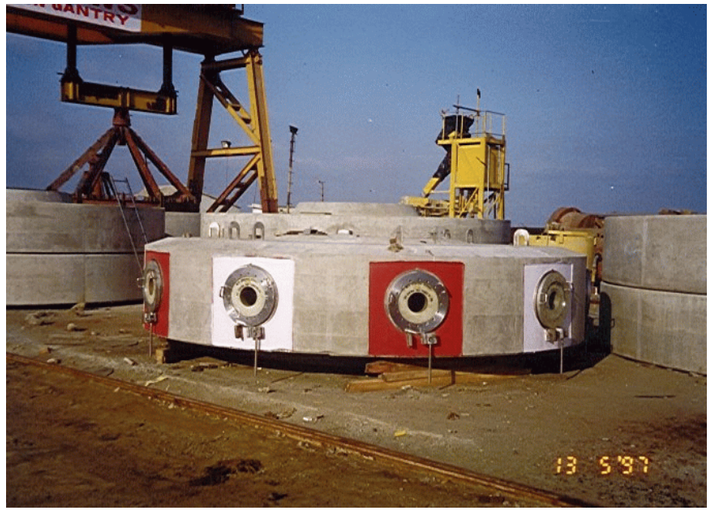
Land and Marine Geotechnical Investigations

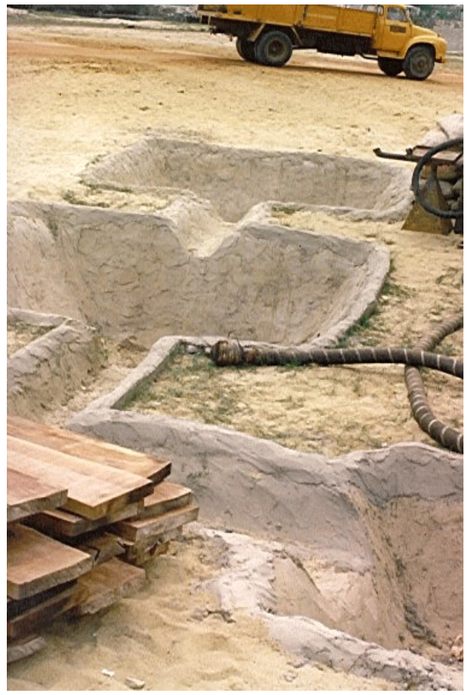
Designing ground investigations demands an understanding of the parameters that are required, how to measure them and the influence of standard measurement techniques on the values themselves.

The site conditions must be understood so as to plan access and progress. In marine works, seabed conditions, tides, water depths and currents must be taken into account for the periods of working.

We have long experience with specialist tools for sampling sensitive soils, weak rocks.

Specifying large in-situ tests such as plate bearing tests, cone penetration tests and geophysical well-logging tools as well as seismic, electrical and nuclear, land and marine geophysical tools.





Flexibility is important. Both ideas and plans change during the investigation phases and these options must always be considered during initial planning.

Antonio Associates can design and plan investigations in any region be that remote desert or over water.

		working or manoeuvring		on station		under tow and/or off-station	
		seas 0m - 3.5m	period and/or direction dependent		seas 4.5m - 6.0m	seas 6.0m - 8.0m	seas greater than 8.0m
currently 3 hours ->	current weather (now to ST)	working	work or anchor move	work or Standby	weather anchor	under tow	OFF SITE
expected 6 hours ->	expected (ST to ST+3)	working	work	work or anchor move	make safe dredge and flow line	prepare for weather anchor / tow	off site or under tow
expected 12hours ->	short term (ST+3 to ST+9)	working	working	working	working	make safe dredge and flow line	under tow
expected 24 hours ->	long term (ST+9 to ST+24)	working	working	working	working	working	make safe; prepare for tow
expected 48 hours ->	long term (ST+24 to ST+48)	working	working	working	working	working	working

Of particular importance is our ability to organize rapid investigations for specific problems found during construction.