

## OVERWATER PROJECT EXPERIENCE (2011-2019)

PROJECT	CLIENT	SCOPE OF WORK	DATE	VALUE
<b>Gridlink</b>	MMT	Two boreholes to 30m at each landfall location for HDD drilling in Dunkirk, France and Kingsnorth, UK. Cable percussion followed by rotary drilling. <i>Project highlights: Management of positioning on mud flats with very shallow tidal water.</i>	2019	£400,000
<b>Lake Lothing, Third Crossing</b>	BAM Nuttall	Marine and land contract with land boreholes, CPTs and trial pitting, together with marine boreholes and pre- and post-boring sediment sampling. Lankelma carried out drilling from Sandpiper jack-up platform, using cable percussion techniques, to 60m. <i>Project highlights: Overcame very challenging ground conditions while keeping in the confines of the MMO licence (less than 4m<sup>3</sup> to be extracted from the ground). Good management of major subcontractors. Sensitive project environmentally and a lot of local public interest.</i>	2019	£430,000
<b>Greenlink</b>	MMT	Two boreholes to 10m and 25m at each landfall location for HDD drilling in Wales (Pembroke) and Ireland (Co. Wexford). Cable percussion followed by rotary drilling. <i>Project highlights: Overcame extremely challenging conditions for towing and positioning.</i>	2018-19	£775,000
<b>IFA2</b>	Next Geosolutions	Four boreholes to 15m at very nearshore locations for a cable route close to a public beach in northern France. Works had to be completed within a very tight timescale. <i>Project highlights: Rapid mobilisation, all works completed within schedule despite tidal restrictions for moving, jacking and crew changes.</i>	2018	£250,000
<b>Celtic Interconnector</b>	Next Geosolutions	Three boreholes to 25m at very nearshore locations for an HDD cable route design close to a public beach in southern Ireland. <i>Project highlights: Rapid mobilisation, passed inspection by the Irish MSO with no re-visit required, all works completed within schedule despite tidal restrictions for moving, jacking and crew changes.</i>	2018	£400,000
<b>Navigator Terminals</b>	CMP Thames	Short possession borehole (28m achieved in three shifts) at Navigator Terminals to investigate the sediment depth and 20m below the chalk level for the replacement of a damaged dolphin. All resources and personnel provided together with logging and laboratory testing.	2018	£50,000

PROJECT	CLIENT	SCOPE OF WORK	DATE	VALUE
<b>Boston Barrier</b>	BAM Nuttall	Marine site investigation working in a tidal river, comprising standard, seismic and full displacement pressuremeter CPTs with drill-outs for pile and foundation design for the flood barrier and associated pile design of adjacent quayside. Sandpiper jack-up in smaller 15m by 12m configuration, rotary drilling rig and top push CPT rams - two options for CPT deployment through moonpool and via cantilever (to refusal only) running day and night shifts. Complemented with land-based CPTs undertaken using a wheeled 20-tonne rig.	2017	£200,000
<b>GulfMex Pipeline</b>	TransCanada	Marine ground investigation comprising boreholes to 50m with adjacent top push CPT as well as independent boreholes and CPT to 10m at two nearshore crossing locations. Operating platform: Local self-propelled three-leg jack-up platform. Laboratory operation onshore due to limited space on board. <i>Project highlights: Rapid mobilisation required; logistics and crew required good management to complete work in less than ideal seasonal weather conditions. Flexibility with frequently reassessed client requirements.</i> <i>Sector: Oil and gas</i>	2016	\$3,200,000
<b>Kamsar Port, Guinea</b>	Geocontrole (various clients)	Provision of jack-up platform and operational personnel for various geotechnical works.	2015-2016	£600,000
<b>Kamsar Port Development, Guinea</b>	Guinea Alumina Corporation	Marine survey for dredging and piling works in the channel approach, turning basin and location of new jetty. Boreholes up to 50m and CPTs with drill-outs on refusal, vibrocoring, bathymetric and geophysical survey, metocean survey including ADCP and tidal gauge installation and monitoring, laboratory testing, data correlation and final reporting. Operating platforms: 18m by 12m jack up, local survey craft and multicat. <i>Project highlights: Successful completion overcoming major logistical and health challenges; maintenance of good client communications and relationship; management of, and liaison with, a number of subcontractors.</i> <i>Sector: Mining infrastructure</i>	2014-2015	\$3,500,000

<b>Puente Nigale, Lake Maracaibo, Venezuela</b>	Geohidra	<p>Marine ground investigation in 5-20m water depths providing boreholes to 70m and CPT to 55m below seabed. Investigation techniques include rotary drilling, triple tube core sampling, top push and downhole (Wilson APB) cone penetration tests. Operating vessel: 18m by 12m jack up platform.</p> <p><i>Project highlights: Enhanced production rates using Geobor S rotary wireline drilling integrated with Wilson APB downhole CPT; dedicated resource management mitigating in country supply chain risk.</i></p> <p><i>Sector: Public infrastructure</i></p>	2013-2014	\$5,000,000
<b>Libwa Field, Leg Penetration Assessments, Democratic Republic of Congo</b>	Perenco	<p>Multi-stage project investigating existing and proposed oil and gas exploration platform locations. Scope comprised boreholes and cone penetration testing to 80m, working off Hercules offshore liftboat (Blue Shark), soil sampling and confirmatory laboratory testing. Leg penetration assessment was provided to enable confirmation of suitable platform positioning.</p> <p><i>Project highlights: Rapid mobilisation in response to urgent operational conditions in West Africa; manual transfer and set up of drilling and CPT equipment.</i></p> <p><i>Sector: Oil and gas</i></p>	2013	£2,800,000
<b>Beckton Outfall, River Thames, London</b>	MVB-JV	<p>Marine ground investigation off spud-legged barge comprising cone penetration techniques for the soil classification and UXO clearance of 500 positions to enable sheet piled outfall culvert construction.</p> <p><i>Project highlights: Operating in advance of piling construction works and providing clearance certification and advice on additional ground investigation as the work proceeded.</i></p> <p><i>Sector: Water</i></p>	2013	£250,000
<b>Dissoni Field, Leg Penetration Assessments, Cameroon</b>	Perenco	<p>Ground investigation to verify oil and gas exploration platform locations. Scope comprised boreholes and cone penetration testing to 80m, working from jacketed well heads and an Hercules exploration platform. Primary investigation technique was CPT, supplemented by core samples of sensitive marine mud at 60m and confirmatory laboratory testing. Leg penetration assessment enabled confirmation of suitable platform positioning.</p> <p><i>Project highlights: Rapid mobilisation in response to urgent operational conditions and manual transfer and set up of drilling and CPT equipment on board operational exploration platform.</i></p> <p><i>Sector: Oil and gas</i></p>	2012	£700,000

<b>Cammell Laird Shipyard, Birkenhead, Wirral</b>	Peel Ports	<p>Marine ground investigation in former shipyard basin, comprising cable percussion boreholes to 30m and cone penetration testing to 25m. Work was undertaken off a spud-legged barge secured by three-point anchoring system.</p> <p><i><u>Project highlights:</u> Novel approach to CPT, resulting in the use of floating barge and casing system to compensate for heave.</i></p> <p><i><u>Sector:</u> Ports and harbours</i></p>	2012	£130,000
<b>Corrib Field Foreshore, Eire</b>	Shell	<p>Marine ground investigation comprising rotary drilling and top push cone penetration testing for pipeline route landfall locations, associated reporting.</p> <p><i><u>Project highlights:</u> Operating in an environmentally-sensitive location with significant local protest groups. Managed activities to ensure minimal disruption to locality.</i></p> <p><i><u>Sector:</u> Oil and gas</i></p>	2011	€950,000
<b>Hong Kong Zuhai Macau Bridge</b>	CCCC-FHDI Engineering	<p>Provision of specialist seabed cone penetration services using a Roson CPT system deployed from local Chinese vessels. Due to the success of the application, the programme of work was extended to cover a larger geographic area previously assigned to drilling operations.</p> <p><i><u>Project highlights:</u> Achieving 30m deep seabed CPT in completely decomposed granite to meet a specification that had previously proven unachievable. Provision of quality audit and training activities to mainland Chinese contractor to a standard that provided the quality assurance necessary for approval by the Hong Kong Government engineering representatives.</i></p> <p><i><u>Sector:</u> Public infrastructure</i></p>	2011	£330,000