AqualisBraemar LOC Group

Annual Report 2020

www.abl-group.com

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The **Energy** and **Marine** Consultants.

AqualisBraemar LOC is a leading global independent energy and marine consultant working in energy and oceans to de-risk and drive the transition across the renewables, maritime and oil and gas sectors, offering our customers the deepest pool of world-class expertise across marine, engineering and adjusting disciplines from more than 300 locations worldwide.

AqualisBraemar LOC Group

The AqualisBraemar LOC Family

Through targeted acquisition and organic growth, AqualisBraemar LOC have built a comprehensive family of branded energy and marine consultancy companies offering services that are both complementary and interconnected. This allows our business lines, branded service companies, and expertise to focus closely on delivering technical excellence in engineering and consultancy, loss prevention and loss management.

AqualisBraemar LOC

AqualisBraemar LOC is a leading global independent energy and marine consultant working in energy and oceans to de-risk and drive the energy transition across renewables, maritime and oil and gas sectors.

Offshore Wind Consultants (OWC)

Project development services, owner's engineering and technical due diligence to the offshore renewables industry.

John LeBourhis & Associates (JLA)

Rig moving, risk control services and surveying services, specialists in MODUs.

East Point Geo

Expert Geoconsulting organisation supporting all sectors; providing efficient client-focussed deliverables including data assurance, ground models and quantitative risk assessment.

Longitude Engineering

Independent engineering, design and analysis services for the marine, renewables, oil & gas, defence, and offshore infrastructure industries.

INNOSEA

Engineering advistory, verification, research & development, concept development and consultancy for marine renewable energy.

ABL Yachts

Superyacht surveyors and consultants.

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Key Financial Figures

Results		2020	2019
Revenue	USD thousands	77,015	54,792
Adjusted EBITDA[1]	USD thousands	6,320	2,015
EBIT	USD thousands	2,946	(332)
Adjusted EBIT[1]	USD thousands	4,843	1,325
Profit (loss) after taxes	USD thousands	1,513	9,037
Adjusted profit (loss) after taxes[1]	USD thousands	3,280	243
Return on equity (ROE)[1]	%	9.6%	0.7%
Return on capital employed (ROCE)[1]	%	6.8%	3.3%

Balance sheet and cash flow			
Cash and cash equivalent	USD thousands	30,642	10,930
Equity ratio	%	55.9%	74.5 %
Cashflow from (used in) operating activities	USD thousands	8,474	(2,665)

Operations			
Order backlog at 31 December [1,3]	USD thousands	75,992	13,800
Employees at 31 December[2]	Full-time equivalents	790	422
Lost time injury per million man-hours	Per million man-hours	-	1.64
Billing ratio [2]	%	72%	76%

Share data			
Basic earnings per share	USD	0.02	0.16
Number of shares outstanding at 31 December	million	92.55	70.42
Number of options outstanding at 31 December	million	8.32	8.76
Number of warrants outstanding at 31 December	million	1.00	5.97
Share price at 31 December	NOK	9.00	3.89
Dividends paid per share	NOK	0.40	-

[1] Alternative Performance Measures
[2] Including subcontractors, full time equivalents (figure excludes LOC Group)
[3] Order backlog figure includes LOC Group

Financial calendar 2021

Event	Date
First quarter results	19/05/2021
Annual General Meeting	02/06/2021
Half-yearly results	20/08/2021
Third quarter results	28/10/2021

Ticker symbol

Oslo Børs	AQUA
Reuters	AQUA.OL
Bloomberg	AQUA:NO

ISIN No	NO0010715394
Share Register	DNB Bank ASA Verdipapirservice Postboks 1600 Sentrum 0021 Oslo

Letter from the Chairman

Dear fellow shareholders,

The value drivers in AqualisBraemar LOC (ABL), or in any company, can be divided into two categories, the internal value drivers – that the company controls itself – and external value drivers – that are not controlled by the company, but which management can mitigate or react to.

The combination of Aqualis, Braemar Technical Services (BTS) in 2019 and LOC (2020) is an important source for several of the key **internal value drivers** for the company over the next 2 to 3 years. The most important being:
1) professionalisation and specialisation of management and support functions; 2) cost synergies; 3) capital efficiency; 4) market reach and service offering; and 5) alignment of incentives between employees and shareholders.
I will discuss each in more detail below.

Professionalisation and specialisation of management and support functions. The number of full-time employees (including subcontractors) increased from 182 (Aqualis) at the end of 2018, to 422 at the end of 2019 (Aqualis+BTS) and to 884 at the end of 2020 (Aqualis+BTS+LOC). Three small companies have joined forces and we are now a small-medium sized company that can "afford" improved internal IT, legal, human resource and financial competences. Similarly, the heads of our offices and business lines are now becoming more managers, and less professionals with some managerial responsibilities.
To run a global business in 39 countries you need good systems, good routines and excellent management to run this effectively, smoothly and being able to ramp up and ramp down projects and offices as business moves or spreads to new geographies. In 2020 we opened 3 new offices for our renewables business, and we also opened or expanded our Adjusting to 3 new countries. Our ambitions for 2021 are no less. This can only be done if you have your "house in order" and systems that support this expansion.

Cost synergies. The cost synergies will come from three major sources, 1) office costs; 2) rationalisation of back-office and management costs; and 3) reduction of other overheads such as IT, subscriptions, insurance and support costs. When we merged with BTS in 2019 the initial cost synergy estimate was USD 1.1m. As integration progressed this increased to USD 2.8m of which approximately 2.5m has been realised to date. Similarly, the initial estimate of cost synergies from the merger of AB with LOC is USD 3.5m. I would be delighted if I am able to report next year that our LOC synergy estimate was also too conservative. When the three companies were separate, the indirect overhead cost was in the region of 25-30% of revenue. So a realistic target when the three companies are fully integrated, is nearer 20% of revenue as group overhead costs are driven down by a combination of direct cost savings and benefits of scale as revenue increases.

Capital efficiency. ABL business is classified as a capital light business with a low to moderate profit margin. The capital invested in ABL is mainly used for working capital and for cash held in the various offices world-wide (we have 67 offices today in 39 countries). Aqualis had 60 days of net working capital (NWC) before merging with BTS. After the merger with BTS the NWC jumped to 130 days on average, however since the merger with BTS (before the merger with LOC) we have managed to reduce the average NWC to 96 days. During 2020 we had a positive net cashflow from reduction of NWC of USD 4.7m and we expect this trend to continue in 2021 as well with the inclusion of LOC and more WC capital optimalisation in the former BTS. ABL had cash of USD 30.6m at the end of 2020. None of the three merging companies have historically been focusing on cash management and treasury. We are now professionalising the treasury function and will build a cash pooling system. In combination with an existing RCF with our

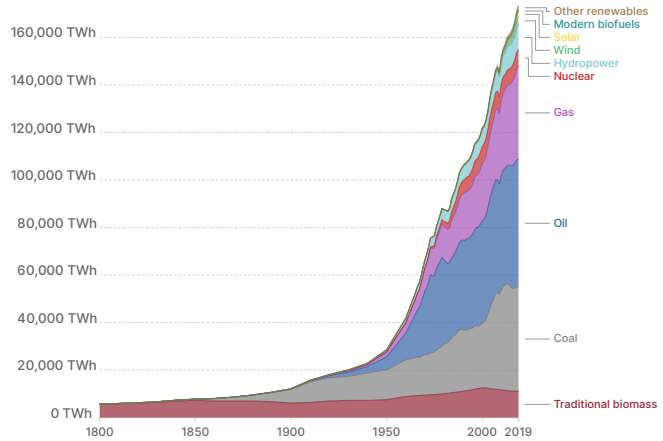
bank, Nordea, this is expected to reduce the necessary gross cash in the company to USD 10-15m (assuming the same level of revenue and business).

Market reach and service offering. In 2018 Aqualis had 19 offices and today after the mergers with BTS and LOC, the ABL-Group has offices in 67 locations in 39 countries on all continents and in all major maritime and offshore energy hubs world-wide. We are a global partner, local expert to our customers. We are sharing talent and key competence on a global basis, but the interaction with customers is often local and the projects and equipment we are assisting often need local presence. In terms of our service offering, in 2018 80% of our business came from offshore oil and gas. Today about 50% of ABL's revenue is derived from the offshore O&G, about 25% from maritime and about 20% from offshore renewables and the rest of our business from loss adjusting. Although we are less able to track and quantify income synergies, we have already identified and expect more income synergies as the companies grow together and a clear example is the oil majors which are now diversifying their investments also into renewables projects. One vital initiative that will help drive these income synergies will be the implementation of a new ABL group wide CRM enabling better returns from the broad relationships this merged group brings together as well as better coordination of business development activities across our teams and geographies.

Alignment of incentives between employees and shareholders. ABL's employees are mainly highly educated and experienced engineers and mariners. The core thinking of ABL is that shareholders and employees are partners, similar to what we experience in other intellectual capital heavy services like auditing, management consulting, law firms and investment banking. We value our people; our value comes from them. ABL invests in people, not in hardware. That is our business and our focus.

ABL has established a long-term share-based incentive system (for details see page 61 in the annual report). The employees of ABL own currently about 25% of the shares in the company (fully diluted including outstanding option), in addition 15% of EBITA is reserved as bonus for the employees. So in total the employees get about 35% of this combined profit and dividend value. In ABL we believe the incentive system is key for the sustainability of our staff levels, promoting higher acceptance of continuous change in the company and a unanimous focus on profitability and capital efficiency in the company from all stakeholders.

External value drivers for ABL. The energy industry is a very capital-intensive industry and changes to the 'system' are extremely slow. The industry requires long planning durations and significant investment before the energy is available for consumption. This includes the coal, nuclear, oil & gas, hydro industries, and for renewables. The global consumption of energy has for the last 95 years increased on average 2.1% p.a., slowing to about 1.9% p.a. during the last decade. The growth in energy is driven by population growth and economic expansion, especially in emerging markets and partly offset by energy efficiency technology. The mix of energy-fuels has changed significantly from 1925 until today, but despite this no energy-fuel has been reduced in volume over that period. Even traditional biomass (wood) has increased by 40% in total, between 1925 and today, but the "market share" of wood has fallen from 30% in 1925 to about 4% in 2019.



Source: BP Statistical Review

The growth in renewables as an energy-fuel has on average been 13.7% p.a. for the last 10 years. Energy from renewable sources (excluding hydro) was, at the end of 2019, about 5% of the energy consumed globally. If the growth of energy continues at about 1.9% p.a. over the next few years, the installation of new renewables generation capacity needs to increase by about 9 times annually from 2019's level just to cover that annual growth in energy consumption. Final investment decisions (FID) for offshore wind projects (ABL's major renewables segment) was 8.7 GW in 2020, a significant increase compared to 3.7 GW in 2019. The growth in renewables is clearly formidable, but in my opinion the world still needs more energy from traditional sources for the next 10-15 years minimum to deliver the energy demand. The energy transition is happening now, but the energy system is so massive that it will take longer than most observers seem to believe to really change the fuel mix before fossil fuels not only lose market share, but are also reduced in absolute terms in the energy mix. Given the current energy agenda in

EU, US, OECD, China and other key nations the growth and investment in renewables will grow significantly for the next number of decades. But in addition, to allow us to meet international CO2 emission reduction targets, I am convinced that we need carbon capture and storage technology (CCS) deployment at commercial scale. For the medium term the burden of reducing emissions in our energy 'system' cannot be laid on renewables alone.

ABL is an asset light energy and marine consultancy and to a larger degree energy source independent. We are also global, not being dependent on one country's energy policy, but the mix of all countries energy policies. At the start of 2019, ABL (then Aqualis) was about 80% dependent on the offshore oil and gas industry. After the acquisition of Braemar Technical Services in 2019, LOC at the end of 2020, and organic growth of 52% p.a. for the offshore wind segment (OWC standalone), oil and gas is now only about 50% of the company's consolidated revenue. With offshore wind growing at rapid pace from a low level, this diversification is only expected to continue. ABL's strategy is to have 50% of revenue from the renewables and transition energy segment by 2025.

My expectation for ABL's markets in 2021 is one of continued rapid growth for renewables, with moderate growth for the traditional business within Oil and Gas and Marine. However, from 2022 or possibly the second half of 2021, there is a significant risk for another raw material shortage cycle in the world economy, following a combination of underinvestment in raw materials in general over the last 7–10 years and strong world GDP growth after the Covid-19 recession. In addition, we should not forget that renewable energy investments are raw material intensive and the energy for mining, transporting, refining, assembling, and installing new renewables capacity will use traditional energy. I would argue that in the medium term we will see a boost in the use of traditional energy sources to fuel the energy transition. All this considered, I expect another upcycle for traditional energy including Oil and Gas based on three key factors; underinvestment over the last 7–10 years, strong economic recovery after Covid-19 and an increased demand for raw materials also driven by energy to fuel the energy transition.

In summary the 2020 market for ABL was excellent for renewables while at the same time we experienced significant headwinds in the O&G market and partly in maritime. In 2021 the growth in renewables will continue and accelerate (in absolute numbers) and the headwinds in the traditional business will end and maybe turn around to moderate growth and improvement. From 2022, I expect that we will be in a situation where all segments in the energy and marine consultancy market are growing; renewable energy will continue on a multiyear structural growth phase and oil & gas will likely be in a cyclical upswing.

Strategic focus for ABL. Our strategy is based on three main pillars: 1) expansion and growth in renewable energy, transition energy investment and other emerging offshore industries; 2) lever our position within the traditional markets within maritime and oil and gas including contributing to further consolidation in our industry; and 3) capital efficiency, take out synergies from the combination of the three companies and return capital to our shareholders and employees.

The normalised operating margin in the proforma consolidated ABL was 5.8% in 2020. 2021 will be a year of integration and transition in terms of reported operating profit, as there will be integration costs from both LOC and the final integration of BTS partly offsetting the underlying expected improvement in the operation of ABL. The team is working hard with the controllable internal value drivers; professionalisation of the back-office, taking out synergies, capital efficiency and realising the benefits of a broader business offering and our extended global network to drive dynamic income synergies. Our medium-term target is to get to an operating margin of 10% (EBIT margin), further reduction of underlying net working capital, and to reduce the tied up cash on the balance sheet with 50% combined with an RCF. Note that the year-end accounts include certain one-off effects temporarily reducing net working capital, and some increase should be expected in the short term until integration is completed. The planned strategy to simultaneously increase the nominator (EBIT) combined with a reduction of the denominator (capital used) should have a meaningful impact on ROCE and ROE. This looks simple, but it will take hard work and focus to realise this simple math on a sustainable basis.

In 2020 we paid a dividend (or more correctly a reduction of capital) of NOK 0.40 per share (paid in June and November). The board has proposed an ordinary dividend of NOK 0.25 to be paid after the AGM in 2021, and a similar dividend should be expected in November 2021. The strategy of the board is to gradually increase the dividend as operations improve and the capital tied up in the operation is reduced to competitive levels.

I would like to welcome the LOC team which joined us in late December 2020. I really look forward to work with our new colleagues from LOC. Further, I would like to take this opportunity to thank the management team and employees at AqualisBraemar LOC (ABL) and especially thank CEO David Wells and COO Reuben Segal for leading the company through an unexpected pandemic and another recession in Oil & Gas, while at the same time delivering operational improvements and significantly reducing the working capital during 2020. Further, I would like to thank Haakon Brandrud for leading the company through the two successful acquisitions (my expectations, though it is still early days) of LOC and East Point Geo and arranging the associated financing. And finally, I want to thank Will Cleverly for this strong leadership and strategic development of OWC and carefully management of the growth of our renewable business.

Last year I said never waste a recession. It creates opportunities. I think we did OK with respect to getting something out of the downturn during 2020. This year I say that we should move swiftly with our internal processes, to be ready to make the most of the renewed growth in our markets. The oil and gas industry has passed the worst and the renewables industry will continue its strong growth, but the key to staying ahead is constant change and improvement. You should never dwell too long on your past achievements. The focus should be on the next achievement or target. That goes for sports as well for business.

Glen Rødland | Chairman of the Board

Renewables

The following service line description represents the services offered during 2020 prior to the LOC merger.

The Group offers services in the offshore renewables sector through its OWC and AqualisBraemar LOC businesses.

Through OWC, the business line solely focused on offshore wind, we provide project development services, owner's engineering and technical due diligence to the full value chain of technology and projects. OWC has significant experience in the industry, dating back to the first offshore wind farm development project in the UK. The key members of the team have been involved in most of the major offshore wind projects that have been developed in the UK and the rest of Europe to date. Since the establishment in 2011, OWC have delivered assignments amounting to more than 68 Gigawatts and over 90 projects across Europe, Asia and the US.

In combination with the Group's other services, OWC is able to deliver enhanced services to its customers by sharing knowledge, expertise, and resources, particularly where engineering and offshore attendances are required.

Key services

We specialise in providing services to offshore renewables developers, lenders and investors. We add value to customers through our experience whether they need support to realise a project or invest into a technology or project or develop their business or technology. We can align closely with our customers' business goals and strategies enabling us to deliver practical and innovative solutions.

We support the following offshore renewables market segments:

- Offshore wind (fixed and floating)
- Ocean energy (wave and tidal)
- Subsea cables
- Energy storage

The Group supports the following needs:

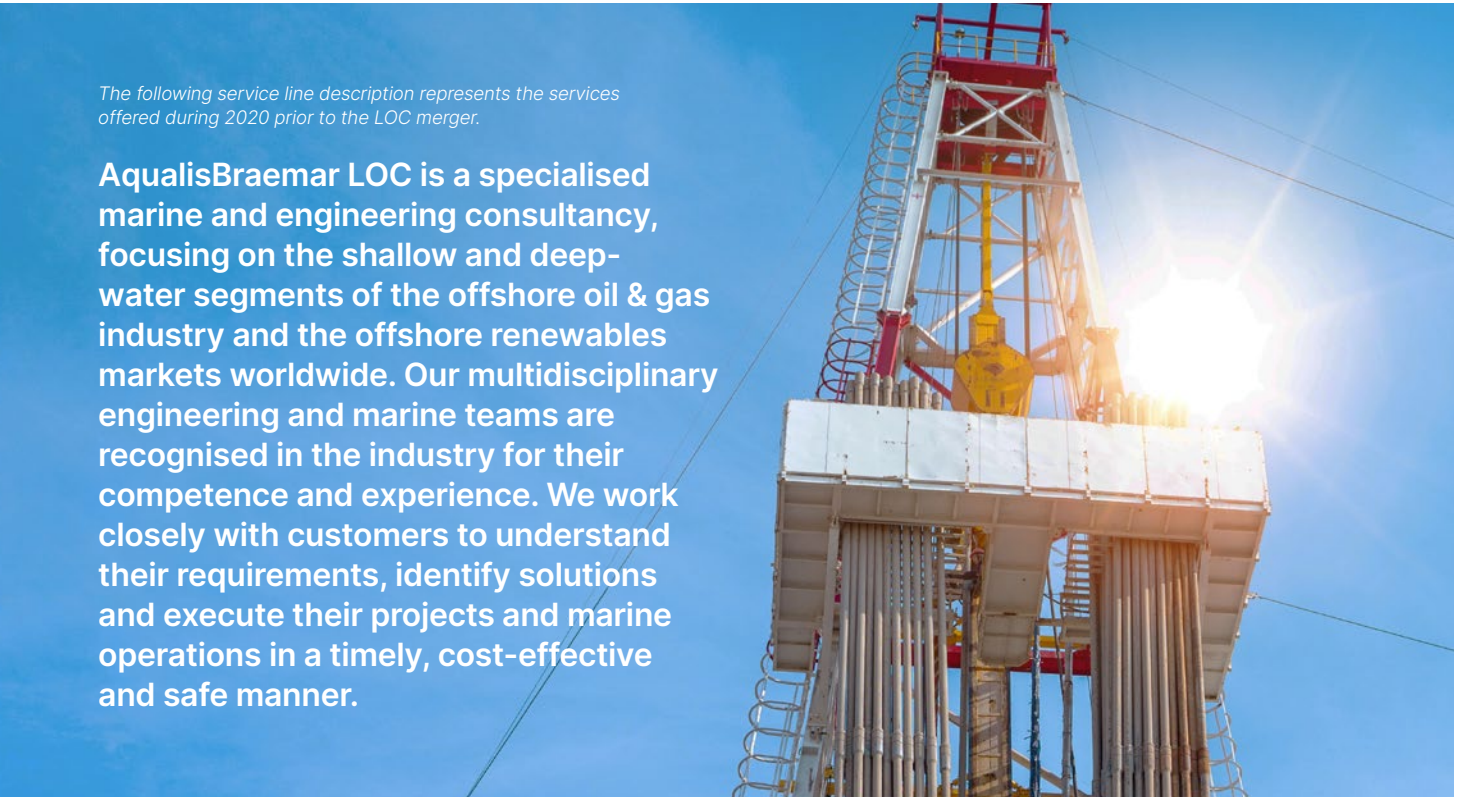
- **Projects:** We have been involved in over a quarter of offshore wind developments globally to date. Our experienced team of offshore renewable experts take a full lifecycle approach to your project; from feasibility to operation to decommissioning/repowering.
- **Business intelligence:** Data, analysis and insightful opinion is the key for making the right business decisions. We help customers analyse and identify opportunities and gain real benefit from evidence-based insights.
- **Transactions:** We can advise on projects and technology around the world. With hands on experience of developing, constructing and realising offshore wind projects we provide real world advice on financial risks regardless of the stage of the technology or project.

The Group's service portfolio is broad and delivered by experts with deep experience. Our offshore renewables service portfolio is:

- **Project Development Services:** We provide all the early studies necessary for constraint analysis, site selection studies and early site evaluation developing LCOE and other inputs into early DEVEX decision making.
- **Strategy, Market and Policy Studies:** Offering advice and consultancy for all current and emerging offshore renewables markets and technologies.
- **Technical Studies:** We draw on a vast range of technical expertise enabling us to provide technical studies in almost every area of interest. Some of our delivered studies cover fixed and floating foundation design, including coupled load assessments, weather downtime analysis (sequenced downtime analysis utilising Monte Carlo simulation), technical risk assessments and CAPEX and OPEX modelling.
- **Wind Measurement Advisory Services:** We combine first-hand research knowledge in the field of wind measurements with practical experience from a large number of commercial project assignments. OWC experts have provided technical and consultancy services to several floating Lidar deployments in commercial projects making OWC a leading technical advisory in the field of floating Lidar technology and measurements.
- **Owners Engineering:** We bring in depth design and construction experience, first-hand experience of offshore installation and all the associated technological challenges as well as bringing the lessons learnt from many other projects. We cover the entire project lifecycle and can either manage or consult on a project on customers' behalf, or supplement customers' own teams.
- **Operation & Maintenance Consultancy:** Advice on all phases and aspects of O&M including deep expertise in subsea cables. We cover emergency cable repair support, cable remediation solutions and works, scour issues, survey management. In the wider O&M space we cover operations management, technical support services, commercial management, O&M concept and strategy, modelling for OPEX, operational CAPEX, logistics, WTG availability and downtime calculations and QHSE.
- **Technical Due Diligence:** We offer specialist technical due diligence supporting the financing, acquisition, sale and refinancing of assets, technology and companies within the offshore renewables market. Owners and financial institutions can obtain an objective expert view on the actual offshore wind project performance or asset value, as an important input to the decision-making process related to loans, consolidation or acquisitions.

- **Geotechnical Engineering Services:** A core service; the OWC geotechnical team consists of engineers who have many years of experience within the offshore wind industry and possess both excellent design and analytical skills combined with direct experience of working offshore. We bring leading experience and expertise in Offshore geophysical and geotechnical site investigations, live interpretation of site investigation data to inform ground model updates and immediate design assessments, foundation design and installation analysis, cable route risk analysis and planning and site specific assessments for jack-up locations including leg penetration analyses. OWC combine this expertise with a number of in-house innovative tools that have reduced DEVEX & CAPEX costs on projects.
- **Project Management:** OWC provide project management service support through all stages of an offshore wind farm project. Our reputation is based on early involvement in projects; from the planning, design and engineering and then seeing our role expand to a project management service provider through the construction, installation and commissioning phases of the project. Our team can either undertake a leading role and manage a project directly on behalf of an owner, or more commonly, work as part of an integrated team with our customer, managing specific packages of work and providing support and advice to all other areas of the project.
- **Engineering:** We are able to provide structural engineering services support through all stages of an offshore wind farm project. The services we can provide include: structural analysis and design for offshore WTGs and offshore substations, both fixed and floating, for all stages of the design process/projects including optioneering and concept, FEED studies, optimisation to reduce LCoE and increase profitability, and detailed design. We also have specialists in mooring lines, electrical engineering, and dynamic cable analysis.
- **Expert Witness:** Our offshore wind team bring a proven track record in forensic investigation and the provision of expert witness reports and testimony for use in dispute resolution, arbitration, mediation or in the court of law.
- **Transport & Installation / Marine Operations Consultancy:** We offer transportation & offshore installation feasibility studies, loadout engineering, harbour engineering related to seabed levelling, concrete structures, fenders, linkspans and gangways, transportation engineering, installation engineering for jack-up units going on location, jacket launching and lifting installation engineering, inspection and supervision and marine operations management.
- **Risk Management & Interface Management:** OWC provides risk and interface management through all stages of an offshore wind farm project. We apply proven and state-of-the-art risk and interface management tools and techniques such as Monte-Carlo Simulation, combined with solid experience of our team.
- **HSEQ:** OWC's multi-disciplinary background gives us a very broad experience base across different industries, continents and technical disciplines. We apply risk tools such as standardised risk profiling for projects or operations, integrated risk, planning and commercial profiling and HSE risk categorisation and benchmarking. We use such risk methods in the evaluations of marine operations, qualification of new vessel concepts, risk assessment of wind turbine maintenance tasks, wind farm diving and ROV operations and also for offshore wind helicopter operations.
- **Marine Warranty Services:** AqualisBraemar LOC's marine warranty engineers, surveyors and master mariners act to protect underwriters' or self-insured customers interests. We provide independent third party review and approval of offshore wind projects. We have extensive experience of a wide range of offshore activities from simple marine operations to challenging and complex offshore projects.

Offshore



The following service line description represents the services offered during 2020 prior to the LOC merger.

AqualisBraemar LOC is a specialised marine and engineering consultancy, focusing on the shallow and deep-water segments of the offshore oil & gas industry and the offshore renewables markets worldwide. Our multidisciplinary engineering and marine teams are recognised in the industry for their competence and experience. We work closely with customers to understand their requirements, identify solutions and execute their projects and marine operations in a timely, cost-effective and safe manner.

AqualisBraemar LOC specialises in the following marine and engineering services:

- Deep and shallow water installation engineering and related marine operations
- Marine operations and surveying, including rig moving and tow master services together with engineering support services
- Vessel construction supervision and owner representation
- Engineering and project management support to the renewables industry
- Third party approvals on behalf of owners and underwriters such as marine warranty and audits of dynamic positioning systems
- Concept, FEED and basic design for new-build and vessel upgrades
- Rig inspection services

AqualisBraemar LOC provides customers with global support via an extensive office network. We aim to be your reliable long-term partner.

Our team comprises:

- Naval Architects
- Marine Warranty Surveyors
- Marine Surveyors
- Master Mariners (Tow Masters, Rig Movers, Marine Advisors, Mooring Masters, Consultants)
- DP Practitioners
- Structural Engineers
- Geotechnical Engineers
- Civil Engineers
- Installation Engineers
- Environmental Compliance Engineers
- Project Managers/ Site Superintendents
- Risk Managers/Engineers
- Mechanical Engineers
- Control System Engineers
- Subsea Engineers
- Electrical and Electro Technical Engineers

Marine Warranty

AqualisBraemar LOC is well known in the insurance market by many of the key international energy underwriters. We have been approved as Marine Warranty Surveyors on projects which include offshore construction works, transportations (including float overs and heavy lift topside load-outs), jack-up rig moving and location approvals, towages and dry transportations.

Our teams of Marine Warranty Engineers, Surveyors and Master Mariners provide independent third-party review and approval of offshore projects on behalf of underwriters or self-insured customers. We have extensive experience in a wide range of offshore activities from simple marine operations to complex and challenging offshore projects which include approvals for the following operations:

- Ocean towages
- Barge transportations
- Unusual/oversized cargoes on ships
- Location Approval for MODUs
- Offshore rig move attendance onboard MODUs
- Loadout, transportation and installation of offshore platforms, topsides and subsea structures
- Floating construction activities, floatover, deck mating, FPSO mooring installation & TLP hook-up
- Pipelay operations
- Bridge and harbor construction activities

Typical activities may include:

- Document reviews
- Suitability surveys of offshore marine spreads
- Approval of towages, heavy lifts and installations
- Subsea operations
- Decommissioning and removal of offshore structures
- Acting as Marine Advisors to oil companies and their contractors

Marine Consultancy

We offer a wide range of marine capability to the oil & gas and maritime industries. Our mariners have many years of experience associated with drilling rigs, offshore vessels and trading vessels. We aim to assist our customers in finding practical solutions to their marine operations and projects, and/or protect their interests when sub-contracting or making asset investments.

We offer:

- Provision of Towmasters
- Provision of Marine Advisors
- Dry transportation consultancy and operations
- Vessel inspections
- Rules & regulations compliance
- Inclining experiments
- Pilotage operations
- Rig move procedures
- Suitability surveys and audits
- Pre-charter audits/surveys
- Pre-purchase surveys
- Bollard pull certifications
- Drafting and review of offshore project related procedures
- Mooring plans
- Anchor handling procedures
- Witnessing equipment trials and tests
- Towing plans and procedures
- Common Marine Inspection Document (CMID) and Offshore Vessel Inspection Database (OVID) Surveys

Rig Moving

We offer a full range of rig moving support services for Mobile Offshore Drilling Units. We offer full engineering assessments for site-specific location approvals and provide both Marine Warranty Surveyors and Rig Movers/Towmasters for offshore attendance during jack-up and floating unit rig moves.

The following services are provided:

- Jack-up engineering studies including site-specific assessments, fatigue analysis, collision studies, earthquake assessments, and heavy-lift dry transportation
- Pre-contract rig suitability engineering analyses
- Leg penetration analyses
- Site-specific location approvals
- Mooring analyses
- Transportation approvals and consultancy
- Towage approvals
- Towmaster services
- Rig movers
- Turnkey marine operations
- General rig moving consultancy
- Marine Advisor

Risk Consulting

The Risk Consulting team strengthens AqualisBraemar LOC's marine and engineering services with a methodological and systematic approach to risk management.

Our engineering risk management experience includes drilling and productions facilities. Within marine operations we have performed numerous risk management activities within loadout, transport, anchor handling, rig move, heavy lifting, subsea and SURF installation, dynamic position (DP), hook-up, diving and ROV operations, personnel transport, vessel layup and decommissioning.

We provide the best practices for identifying and managing risks and hazards to personal safety, assets, environment and reputation both in engineering and operations. We can lead, facilitate or contribute to risk management activities such as:

- Hazard Identification Analysis (HAZID)
- Hazard and Operability Analysis (HAZOP)
- Quantitative Risk Analysis (QRA)
- Safety case studies
- Risk assessments
- Failure Mode, Effect and Criticality Analysis (FMECA)
- Carry out inspections
- Provide people who can work within a customer's team to manage risk within a project

Engineering

AqualisBraemar LOC provides a unique solutions-based approach to engineering. Our engineers aim to work with our customers as a one-stop-shop to find efficient solutions to their engineering projects.

Due to our independent status, focus is on cost-effective solutions, fit for purpose and tailoring to suit the specific needs and constraints of our customer. Our offshore engineering expertise covers the life-cycle of an offshore facility from concept and basic design through installation, on to ageing platform integrity management and finally, decommissioning. We are involved in both the shallow and deep water ends of the offshore oil & gas industry and operate from the major centres of the offshore industry.

Our experienced team can provide unique solutions for many platform types including Mobile Offshore Drilling Units (MODU), Wind Turbine Installation Vessels and Liftboats, Mobile Offshore Production Units (MOPU) including FPSO, FSO, as well as other offshore installations and floating structures. Our capability covers the marine systems, structural, geotechnical and naval architectural disciplines.

Solutions range from:

- Concept designs
- FEED and pre-FEED
- Basic designs
- MODU Upgrades, modification engineering and conversion to production platforms
- Advanced engineering studies including hydrodynamic, non-linear response, stochastic and time-domain analysis
- Our combined teams include structural engineers, marine engineers and naval architects

Transportation & Installation

Our multi-disciplined teams of Engineers, Surveyors and Master Mariners have many years of experience in the offshore industry.

We specialise in complex marine operations and can provide valuable early planning and advice to optimise the solutions with regard to vessel and equipment selection, structural design and offshore procedures. Subsequent engineering comprises analysis and design associated with all temporary phases of a marine operation, from loadout and transportation to installation or discharge of high-value offshore assets.

Such engineering includes:

- Vessel ballasting
- Global and local vessel strength
- Vessel motions and stability
- Vessel/cargo interaction
- Grillage and seafastening design
- Design of fendering and installation aids
- Dynamic lifting and rigging
- Hydrodynamic analysis
- Jacket launch and upending
- Dynamic analysis for floatover installations
- Towing analysis and design
- Geotechnical analysis
- Production of appropriate documentation

Our service then extends to offshore operation supervision and support from our qualified and experienced Marine Superintendents and Project Engineers. We draw on the services of external companies where supplementary skills or input are required, for example, metocean data for transportation assessment and planning. These services are tailored to suit our customers' requirements and can be supplied as conceptual/feasibility studies, detailed engineering and operation, or verification.

We have formed strategic alliances with vessel partners, enabling us to provide package solutions for T&I projects such as:

- Platform installations, including topside float overs
- Tow, positioning and hook-up of floating structures
- With these services we provide associated engineering, preparation of procedures and offshore operations management.

Rig Inspection

We offer a wide range of rig inspection services to the offshore oil & gas industry. Our engineers offer years of practical experience in rig inspection, providing regulatory compliance and equipment operability assurance to our customers. Our rig inspection teams develop and execute bespoke rig inspection acceptance programs specifically tailored to our customers' needs.

We specialise in the following services:

- Rig inspection and assurance
- Rig selection
- Rig stacking & reactivation assurance
- New build delivery assurance
- Rig preservation inspection
- Focused rig inspections of the following equipment:
  - Well control equipment inspections
  - API standard 53 compliance audits & gap analysis
  - Cyber-based drilling equipment inspections
  - Integrated Control Management System (ICMS) inspections and testing
  - ROV inspection & assurance
  - Drilling rig equipment Factory Acceptance Testing (FAT) witnessing
- Cyber Security Assessments

Our aim is to provide independent technical reviews of drilling rigs' regulatory compliance and equipment operability to ensure incident-free drilling campaigns with maximum productive time.

Construction Supervision

AqualisBraemar LOC provides teams to work with the customer throughout the construction or conversion of an offshore asset. The project team monitors the project to ensure that it is carried out in accordance with the contract, the specifications, customers' expectations, flag and class requirements.

The project team consists of key personnel with the necessary skills to ensure that the construction meets the build schedule. AqualisBraemar LOC provides a group of engineers and inspectors of various disciplines to be utilised at different stages of the project. In addition, dedicated planning and document control functions are provided throughout the construction phase.

Key project control activities include:

- Development and implementation of project procedures
- Review of machinery and equipment purchase orders and specifications
- Development and implementation of project execution plans
- Monitoring of work progress and testing activity
- Monitoring of quality control of each activity throughout the construction
- Attendance at formal safety meetings
- Attendance at Factory Acceptance Testing (FAT)
- Audits of subcontractors' facilities
- Attendance during sea trials and inclining experiments
- Reporting to the customer on a weekly and monthly basis
- Tracking of site queries, observing safety policy, monitoring quality control measures
- Maintaining electrical & mechanical completion and commissioning records and database
- Monitoring and reporting on extras and credits

Dynamic Positioning & Critical Systems

AqualisBraemar LOC provides an experienced multidisciplinary team of engineering and operational resources to support the Dynamic Positioning (DP) industry. We deliver dynamic positioning services & critical systems consultancy, including DP FMEA (Failure Mode and Effects Analysis), DP audit, DP Assurance and DP project management.

Our services encompass all aspects of the DP system, from initial design consulting, procedures and documentation, proving trials, audits, incident investigation, life extension studies, maintenance and management.

We aim to assist our customers to operate and validate according to their units' specific industrial mission, including drilling units, project and construction vessels, DSV's, accommodation units, shuttle tankers and OSVs. Whether identifying the critical activity mode or verifying the worst case failure mode through FME(C)A, AqualisBraemar LOC aims to provide customers with independent technical reviews to enhance safe operations.

DP Services Include:

- FME(C)A
- DP FMECA proving and annual trials
- DP design review/redundancy analysis
- DP condition & suitability surveys
- DP Capability & gap analysis
- Development of ASOG, WSOG & CAMO
- DP incident investigation
- DP manuals and procedures
- DP operator competence assessment and verification
- DP project management & sea trials management
- Planning for DP conversions
- Dive Auditing and FMEA work
- Dive system FMEA
- Dive system FMEA proving trials
- Dive system auditing
- ROV auditing
- Critical systems FMEAs
- LNG code FMEAs
- Cargo control systems
- HAZID/HAZOP
- LNG bunker barges
- Analyses of cranes, bilge and ballast systems, pipelay systems and other critical systems

AqualisBraemar LOC combines world-class Dynamic Positioning with world-class Rig Inspection services. We are the only Rig Inspection service provider with dedicated DP Practitioners. Our established DP inspection Practitioners bring years of experience with both offshore drilling rigs and offshore vessels.

Technical Due Diligence

With our assistance, owners and financial institutions can obtain an objective expert view on the actual project performance or asset value, as an important input to the decision-making process related to loans, consolidation or acquisitions.

AqualisBraemar LOC is well placed to perform solid, independent technical due diligence services with its combination of engineers and master mariners. The engineers will have been involved from the first concepts to sailaway, including yard contract negotiations, the operational phase, yard stays for repairs, upgrades, modifications and special periodic surveys. The mariners will have been in charge of vessels, rig moves, and major marine operations, including vessel inspection/survey.

- Assessment of vessel requirement vs capabilities
- Design review, professional peer review
- Assessment of owner, project management team and project plans/ schedule
- CAPEX/OPEX budget evaluation
- Identify delay risks and other project risks
- Pre- and post- contract reviews
- Yard evaluation and inspection
- Verification of project progress/payment milestone audits
- Suitability survey, condition survey, assessment of vessel function
- Lifetime assessments
- Assessment of equipment preservation and reactivation

The above services are performed for the following vessels:

- Drilling units: Semi-submersibles, jack-ups, drillships and tender barges
- Production units: Ship-shaped, semi-submersibles and jack-ups
- Accommodation units: Semi-submersibles, jack-ups and tender barges
- Offshore service vessels: Anchor handlers, supply vessels, cable layers, crane vessels, liftboats, tugs, etc.
- Other vessels: Shuttle tankers, oil tankers, floating storage units, wind turbine installation vessels, barges, cargo vessels

Marine

The following service line description represents the services offered during 2020 prior to the LOC merger.

AqualisBraemar LOC is a specialised marine and engineering consultancy, focusing on the shipping and insurance markets worldwide. Our multidisciplinary engineering and marine teams are recognised in the industry for their competence and experience. We work closely with all stakeholders in the marine industry including shipowners, underwriters, brokers, P&I clubs, financiers, lawyers, average adjusters, charterers and relevant authorities & industry bodies. We deliver worldwide emergency casualty, accident or incident response and international marine survey services.

We specialises in the following marine market services:

- Hull & Machinery surveys
- P&I surveys
- Salvage & wreck removal consultancy
- Loss of hire, War risk, ship repairs & builder liability, marine liability and other marine insurance surveys
- Casualty investigations
- Expert witness provision
- Pre risk surveys including Joint Hull (JH) shipyard, vessel and management office surveys
- Technical due diligence services on behalf of financial interests
- Cargo & damage surveys
- Ports & harbours consultancy
- Dedicated yacht team

AqualisBraemar LOC provides customers with global support via an extensive office network. We aim to be your reliable long-term partner.

Our team comprises:

- Dedicated case handling by GSS team
- Marine Engineers
- Master Mariners
- Naval Architects
- Salvage Masters & SCRs
- Marine Surveyors
- Risk Managers/Engineers
- Mechanical Engineers
- Civil Engineers
- Control System Engineers
- Subsea Engineers
- Electrical and Electro Technical Engineers

Marine Insurance Surveys

AqualisBraemar LOC is well known in the marine insurance market as the market leader in hull & machinery surveys. With a global footprint of almost 200 locations we are well placed to respond to marine incidents promptly to better serve our customer's needs. Many of the key international marine and P&I underwriters rely on our services with brokers and assured supporting our services and having us included in many slips. We offer support to the wider industry by active involvement in industry bodies such as the LMA, JH committee, JMCC and IUMI.

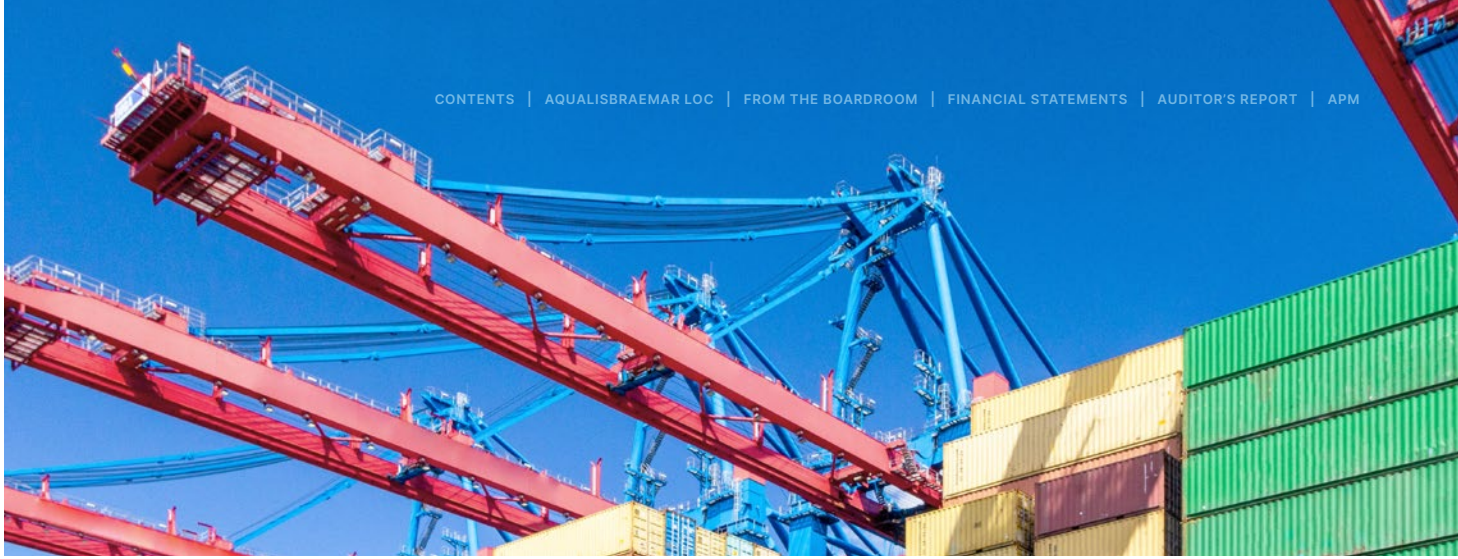
With over 150 years of experience in the field we bring tradition and history combined with innovation and a modern approach to the marine claims and pre risk process.

Marine insurance services offered:

- Hull & machinery surveys
- P&I surveys
- Dedicated yacht team
- Cargo interests' surveys
- Loss of hire surveys
- Ship repairs liability surveys
- Ship builders liability surveys
- Product liability surveys
- Marine liability surveys
- Damage to fixed and floating objects including collision assessment
- Litigation & Expert witness
- Port risks
- Voyage risks
- Loss prevention services
- Personal injury
- Damage surveys of high value equipment and cargo

Joint Hull Surveys:

Our staff have been involved in the development and refining of the Joint Hull Committee's pre risk program over the years. From the previous vessel and management JH115 wordings to the refinement of this through JH2013 onto the current updated JH2019 version focusing on vessel condition, on board vessel management and shore-based management processes. We also have significant experience in conducting JH143 shipyard audits having conducted over 400 such assessments around the world with a dedicated offering covering new yacht builds.



Marine Consultancy

We offer a wide range of marine consultancy to the wider marine and marine insurance markets. Our mariners have many years of experience associated with a variety of vessel types with many bringing further commercial experience as salvage masters, superintendents, shipyard managers, classification surveyors etc.

We offer:

- Provision of Marine Advisors
- Dedicated yacht team
- Dedicated ports and harbour consultancy capabilities
- Salvage and wreck removal services
- SCR provision
- Dry transportation consultancy and operations
- Vessel inspections
- Rules & regulations compliance
- Inclining experiments
- Pilotage operations
- Suitability surveys and audits
- Pre-charter audits/surveys
- Pre-purchase surveys
- Mooring plans

Technical Due Diligence

With our assistance, owners and financial institutions can obtain an objective expert view on the actual project performance or asset value, as an important input to the decision-making process related to loans, consolidation or acquisitions.

AqualisBraemar LOC is well placed to perform solid, independent technical due diligence services with its combination of engineers and master mariners. The engineers will have been involved from the first concepts to sail away, including yard contract negotiations, the operational phase, yard stays for repairs, upgrades, modifications and special periodic surveys. The mariners will have been in charge of vessels, rig moves, and major marine operations including vessel inspection/survey. Our teams can also support the sale and purchase, refinancing or restructuring of fleets and shipping companies.

Technical due diligence services offered:

- Assessment of vessel requirement vs. capabilities
- Design review, professional peer review
- Assessment of owner, project management team and project plans/schedule
- CAPEX/OPEX budget evaluation
- Identify delay risks and other project risks
- Pre- and post- contract reviews
- Yard evaluation and inspection
- Verification of project progress/payment milestone audits
- Suitability survey, condition survey, assessment of vessel function
- Lifetime assessments
- Assessment of equipment preservation and re-activation

The above services are performed for the following vessels:

- Passenger vessels
- Fishing vessels
- Drilling units: Semi-submersibles, jack-ups, drillships and tender barges
- Production units: Ship-shaped, semi-submersibles and jack-ups
- Accommodation units: Semi-submersibles, jack-ups and tender barges
- Offshore service vessels: Anchor handlers, supply vessels, cable layers, crane vessels, liftboats, tugs, etc.
- Other vessels: Shuttle tankers, oil tankers, floating storage units, wind turbine installation vessels, barges, cargo vessels

Aqualisbraemar LOC Yacht Services

Superyachts are a dynamic sector of the marine industry with their own unique challenges. AqualisBraemar LOC combines first-class multidisciplinary expertise, a truly worldwide presence, early response capability and proven reliability to deliver a distinctive bespoke service with exceptional technical content.

Yacht services offered:

- Damage surveys and casualty investigations
- New construction, conversion, refit and repair and project
- Management
- Sale and purchase services
- Yacht safety and loss prevention
- Yacht-specific JH143 shipyard audits

Ports & Harbours

Our Ports & Harbour team specialise in providing Port Capacity and Operational Simulation studies. Utilising our dual purpose software package BRAEVURA ©, we are able to accurately model existing and future traffic flows using AIS data to predict port capacity, berth utilisations and to assess the effects on marine traffic of proposed modifications such as the introduction of new berths, vessel types or navigation rules.

Adjusting

The following service line description represents the services offered during 2020 prior to the LOC merger.

Our team of loss adjusters are recognised as industry leaders by insurance and reinsurance markets worldwide. Any claim assigned is evaluated in terms of its technical challenges, specific engineering discipline(s), insurance conditions, geography, language and cultural nuances.

Classes of insurance handled include:

- Energy
- Marine
- Mining & heavy industry
- Pollution liability
- Power & utilities
- Renewables

Our in-house technical disciplines include:

- Civil engineers
- Drilling engineers
- DP engineers
- Electrical engineers
- Geotechnical engineers
- Marine engineers
- Master mariners
- Mechanical engineers
- Naval architects
- Process engineers
- Quantity surveyors
- Structural engineers
- Subsea engineers
- Wind engineers

Philosophy

We provide the most professional loss adjusting and other expert service, supplying integrated capabilities of the highest calibre, to meet the diverse demands of specialist insurance markets and their customers worldwide. AqualisBraemar LOC is becoming the benchmark for professional service levels in their sector by continuing to invest in its people and infrastructure through a combination of selective recruitment, formal training, systems development, mentoring and peer support, as well as providing the local talent on the doorstep of our customers, to service their immediate and long-term requirements. We believe our services are most effective when all parties trust and rely upon professional independence.

Our Services

AqualisBraemar LOCprovide Energy, Marine and Property Insurers, Brokers and Assureds with the highest quality professional Loss Adjusting and Surveying services, enabling Insurers to reach amicable and equitable settlement of claims made by their Assureds.

This service includes:

- Immediate response, including site visits by relevant technical personnel
- Timely clear, concise communication and regular formal reporting
- Accurate reserve information revised as appropriate throughout the engagement
- Full investigation of circumstances and cause
- Advice on the suitability and cost of remedial measures
- Review of contracts with relevance to insurable interest, indemnification and subrogation
- Complete policy review, identifying terms and conditions relevant to the claim
- Review of recovery potential
- Adjustment, taking full account of policy wording, law and relevant practice
- Impartiality

Expert Witness & Consultancy

Additionally, using the skillsets available within our organisation, AqualisBraemar LOC's team also have significant experience in the provision of Expert Witness services to customers, assisting them in the resolution of disputes.

AqualisBraemar LOC also offers consultancy services to insurers, legal terms, finance houses and banks, oil majors, vessel owners and managers, regulatory bodies and other organisations that require experienced, knowledgeable and reliable expertise, delivered with integrity.