



**aquatera.co.uk**  
*environmental services and products*

## Introduction to Aquatera



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# Overview of Aquatera

## Mission

Aquatera's mission is to promote rational use of resources, protection of the environment and sustainable communities through the provision of information, services and technology to industry, government, other agencies and the public.

Aquatera delivers support for environmental, sustainability and operational projects on a local, national and international level. Based at the heart of the renewable energy scene, Aquatera's client base includes leading marine technology developers, testing facilities, utilities providers and government agencies.

As well as the renewable energy sector, Aquatera's projects have also covered other industries and activities. These include oil and gas, mineral extraction, fishing, fish farming, shipping, conservation, biological surveying and education.

## Philosophy

Aquatera was founded on three principles:

- Good decision making and target setting for sustainable environmental management requires wide understanding of environmental issues
- At present environmental knowledge and understanding is often not available in a form which maximises its use and value
- There are many new and better ways of managing and exchanging environmental information

## Aims

Aquatera aims to achieve the following:

- Increase environmental understanding and promote exchange of environmental information using the capacity of modern information technology networks
- Encourage greater ownership of environmental activities within organisations, promoting greater motivation and commitment
- Contribute to better environmental management leading to more sustainable practices in business and communities

## Areas of Activity

Aquatera's environmental services and products can be applied to many sectors of government, industry and public activities. Sectors of particular expertise include:

- Government strategy and policy
- Oil and gas
- Renewable energy
- Mining and mineral extraction
- Fisheries and fish farming
- Training and education
- Shipping
- Tourism
- Infrastructure
- Grid
- Ports
- Community development

## Services and Products

The environmental services and products offered by Aquatera are organised under six main themes:

- **Solutions** – quality advice, project implementation, presentations of environmental information, research and environmental and studies
- **Technology** – renewable energy, environmental sampling, technology database, engineering design, pollution control systems and bio-resource production
- **Communications** – communications programme management, event management and organisation, awareness materials, electronic presentations, bespoke communication tools and models
- **Designs** – development of environmental identity, design tools, design applications and large format printing
- **Executive** – for example, total environmental support, concept development, awareness events, expert advice, risk and reputation management, environmental communications
- **Online** – computer-based electronic media, including process wizards, document templates, CAD, GIS, visualisations, environmentally focused business models, CD-ROMs and websites

## Technical Experience

To date, Aquatera has carried out a diverse range of environmental and other projects. Types of work include:

- Environmental impact assessment (EIA)
- Strategic environmental assessment (SEA)
- Environmental resource assessment (ERA)
- Environmental statements (ES)
- Environmental survey and other baseline studies
- Environmental sensitivity studies
- Oil spill contingency and response plans
- Development of environmental standards
- Environmental monitoring studies
- Environmental management systems (EMS)
- Hazard identification and risk assessments (HIRA)
- Waste management schemes
- Training
- Audits
- Public awareness and education
- Multimedia programming
- Graphic design

For a more detailed list of Aquatera's project experience, please refer to **Aquatera Project History** on page 14 and also the Database of Projects section of our website at [www.aquatera.co.uk](http://www.aquatera.co.uk).

## A Successful Team of Staff and Associates

People are Aquatera's greatest asset. We have a team of committed consultants who have been involved in the development of marine renewable energy at almost every step over the last 10 years.

Our dedicated associates add a further dimension to our work, experience and capability. Islands such as Orkney are often places where co-operation is an essential element of success. In a pioneering sector such as marine renewable energy we believe that such collaboration will again be the key to success.

### Aquatera Staff



*Gareth Davies PhD*

Gareth is the Managing Director of Aquatera. He has worked as an environmental consultant for over 20 years. He trained initially as a marine biologist, completing a PhD in Deep Sea Biology. He has since completed over 350 projects covering a wide range of environmental and operational topics. Renowned for innovative thinking, unbounded enthusiasm and commitment to finding solutions. Gareth has worked in many areas of the world including Sakhalin, Caspian Sea, Mediterranean Sea, South America and many island groups.



*Alison Skene BSc*

Alison joined Aquatera in 2002 after ten years of conservation work at Scottish Natural Heritage's (SNH) Orkney office. She has a BSc (Hons) in Botany and specialised in plant taxonomy. She has a wide experience of on-the-ground surveying techniques and a strong feeling for community issues, whilst also having an extensive network of contacts across Scotland and wider afield. Alison therefore has excellent vision regarding key sensitivities and approaches to overcoming them. She has been deeply involved in a number of Aquatera's projects where public engagement was required, and has also co-ordinated many of Aquatera's environmental surveying activities.



*Duncan Clarke BSc*

Duncan joined Aquatera in 2003 after graduating from the University of Liverpool with a BSc (Hons) in Marine Biology and subsequently undertaking postgraduate studies in Marine Resource Management in Orkney. He has a great aptitude for data manipulation and management, as well as a wide understanding of marine and environmental processes. He has been a core team member in the development of Aquatera's data management tools and its marine surveying activities.



*Ian Hutchison MSc*

Ian joined Aquatera in 2006. He graduated from Napier University with a BSc (Hons) in Marine and Freshwater Biology and then completed an MSc in Renewable Energy Development at the Heriot-Watt International Centre for Island Technology (ICIT). Ian has a particular interest in marine renewable energy and marine surveying. He has completed a number of Environmental Impact Assessments for devices being deployed at the EMEC test facility as well as contributing directly to the operational support and risk assessment work carried out for developers. He has recently coordinated a number of surveys within and around the Pentland Firth area focussing on marine renewable energy project and infrastructure development.



**Jude Hamilton**  
**BSc MRes**

Since joining Aquatera in 2006, Jude has carried out bird surveys for onshore wind projects in Orkney. She graduated from University of Glasgow with a BSc (Hons) in Zoology. Her main interest lies in ornithology and she has gained experience on a diverse range of ecological research projects throughout Scotland and the Isles.

Jude gained an MRes in Environmental Biology from University of St Andrews and has worked with both the Royal Society for the Protection of Birds (RSPB) and Scottish Natural Heritage (SNH) in Orkney.



**Fiona MacIsaac PhD**

Fiona joined Aquatera in October 2008 after completing an MSc in Renewable Energy Development at the Heriot-Watt International Centre for Island Technology (ICIT) in Orkney.

She first graduated from Glasgow University with a BSc (Hons) in Molecular and Cellular Biology. Following this she spent two years working at the University of Dundee as a laboratory technician. She then completed PhD in Cell Biology at the University of Edinburgh. Fiona has a particular interest in marine renewable energy, biofuels and resource assessment.



**Diane Sinclair BSc**

Diane joined Aquatera in 2008. She graduated from Napier with a BSc in Mathematics with Engineering Technology and has subsequently worked for over 15 years in the environmental sector providing IT skills and support, particularly with regards to computer graphics and mapping.

Diane now works alongside Duncan Clarke on GIS projects, and she also brings computer programming, graphic design and document production experience to the company.



**Marcia Humes**  
**BA MSc**

Marcia joined Aquatera in April 2009, after having relocated to Scotland from Oregon, USA. Marcia graduated from Kenyon College, Ohio, with a BA (Hons) in Biology and received her MSc from Oregon State University in Wildlife Science.

Marcia has worked for over 18 years as a wildlife biologist in Oregon and has a wide range of experience including developing biological assessments; initiating and coordinating wildlife research and monitoring projects; developing management plans; and working with diverse stakeholders to resolve complex issues involving potential conflicts between species and natural resource management.



**Greg Blower**  
**BEng MSc**

Greg joined Aquatera in February 2010. Greg first graduated from The University of Birmingham with a 2:1 degree in Mechanical Engineering, before spending several years working in the upstream oil and gas exploration industry. He then went on to study an MSc in Energy at Heriot Watt University, Edinburgh and completed his dissertation at the Orkney Campus (ICIT). Greg's dissertation focused on the intervention strategies of marine energy devices.

Graduating with a distinction in September 2008, Greg then spent a year working within the moorings and subsea team at Pelamis Wave Power, before moving to Aquatera in 2010. Greg has a good overview of renewable energy, and in particular marine renewables. His interests lie with the various barriers that currently hinder large scale adoption of renewable energy technologies.



**Gill Bishop PhD**

Gill joined Aquatera in May 2010, bringing 20 years of experience as an environmental advisor in the oil and gas industry. She has worked on all environmental aspects of exploration and production, concentrating particularly on environmental assessment and spill contingency planning within sensitive areas.

Her earlier consultancy work focused on marine conservation-related projects. Gill has a PhD in Marine Reproductive Ecology and is familiar with much of the UK mainland and island coasts. She is passionate about long-term monitoring and the importance of a multidisciplinary approach to understanding.



**Sweyn Johnston**  
**BSc MSc**

Sweyn holds a BSc (Hons) in Biological Sciences from Edinburgh University and an MSc with distinction in Renewable Energy Development from the Heriot-Watt International Centre for Island Technology. He also holds a business level Japanese language qualification and studied in the Far East for several years.

Having previous experience as a project manager in the property industry, Sweyn joined Aquatera in 2010. He is particularly interested in developing solutions to the challenges associated with achieving increased energy generation from renewable sources and is passionate about promoting the growth of the renewable industry by strengthening business links nationally and internationally.



**Ingrid Austin BSc MSc**

Ingrid joined Aquatera in July 2010. Prior to this, she attained a BSc (Hons) in Environmental Science (Geography) at Stirling University. She then worked for 3 years as an Energy Advisor to local authorities and individual householders with the Energy Efficiency Advice Centre based in Kirkwall. This role provided energy efficiency renewables advice throughout the Northern and Western Isles of Scotland as part of the Energy Saving Trust's network.

Having enjoyed working in the energy efficiency and renewable energy arena in the UK, Ingrid then won a scholarship to study in Iceland at the Reykjavik Energy Graduate School of Sustainable Systems (REYST) where she specialised in district heating, and gained her MSc in Sustainable Energy in 2010. Since joining Aquatera, Ingrid has been a key contributor to a number of Environmental Impact Assessments.



**Maureen Brown**

Maureen joined Aquatera in 2006 after 20 years' experience in the local tourism industry, firstly with Orkney Tourist Board and later with Historic Scotland.

Her background is in customer service, itinerary planning and event organisation, in addition to extensive experience of promoting Orkney's environment and built heritage. Maureen provides core administrative support within Aquatera, as well as organising all travel, events and other facilities for Aquatera's and its clients' activities.

## Key Aquatera Associates



*Mike Holgate*

Mike has worked in the oil and gas sector for 25 years and has been active in the renewable energy sector for over seven years. Mike has also fished in Orkney waters for a number of years. He has a particular interest in management systems and strategic planning. He has experience of Strategic Environmental Assessment (SEA), programme management and performance measurements for multi-billion Dollar projects across the world, from South America to Russia and the Caspian Sea.



*Gordon Beattie*  
**MA MIEMA**

Gordon has 20 years' experience in environmental management in the UK and overseas. He has worked in a senior advisory role to corporate and operations management in the oil and gas industry including 4 years (1997-2001) as Senior Environmental Advisor to the North Caspian Project in Kazakhstan and 4 years (2004-2008) based in Moscow supporting the Sakhalin-1 Project in the Russian Far East.

He has a successful track record of project management in ESIA, environmental monitoring, emergency planning and infrastructure development studies. This includes direct involvement in the social and economic (as well as environmental) aspects of development planning. He has a particular interest in long-term strategic planning and in biodiversity conservation.



*Will Sutton*  
**BSc MSc PhD**

Will worked in oil and gas for over 20 years managing Projects and Operations for BP before becoming a consultant. He has worked as a renewable energy consultant for over 5 years and took an MSc in Renewable Energy Development at ICIT/Heriot Watt. He is an Honorary Research Fellow of Heriot Watt with a focus on developing the synergies between offshore oil and gas experience and marine renewable energy developments.

He has a special interest in shaping project strategy for successful delivery and in risk management, project management and HSEQ management systems. He has worked as part of the Lenders' Engineer team on many large offshore wind projects and has advised wave and tidal technology developers, and project developers.



*David Runciman* **BSc**

David has worked in association with Aquatera since 2005. He provides specialised support in general environmental survey operations and environmental support for the Oil and Gas industry. This includes interpretation and review of environmental data, environmental survey design, laboratory service assessment and preparation of guidance documentation.

David has 15 years' experience as a Senior Manager at Environmental and Resource Technologies (ERT). Here he was responsible for all aspects of the company's analytical laboratories, overall quality management and corporate IT infrastructure. He established laboratories on Flotta, Orkney and in Baku, Azerbaijan, and became an expert in oil spill identification. David also has five years' experience as an analytical chemist for the Scottish Environmental Protection Agency (SEPA). After reading Chemistry at Napier University, in 1992 David became a Graduate of the Royal Society of Chemistry (First Class). He is a Member of the Royal Society of Chemistry and holds Chartered Chemist status.



**Professor  
Cliff Johnston**

Cliff is one of the founding fathers of modern thinking in the field of sustainable management of the marine environment.

He has worked across many industries, in many parts of the world, and on a multitude of issues. His insight into possible issues for developments, into the thinking of regulators and into the mindset of project engineers is particularly helpful wherever he works. He is currently involved in a seaweed harvesting project.



**Inga Burton  
BSc MSc AIEMA**

Before returning to live in Orkney in 2004, Inga worked as the Environment Manager at the University of St Andrews. Prior to this, she worked for a Structural, Civil and Environmental Consultancy in Edinburgh, providing support mainly for the construction, telecommunications and electronics sectors. She also spent time with a local environmental consultancy in the oil and gas and renewable energy sectors, before establishing IAB Sustainability Consultants. Inga provides technical and advisory support, and also event facilitation and training.

More recently Inga has been project consultant for the Environmental Association for Universities and Colleges Campus Sustainability Programme, responsible for its management and delivery of outputs.

Inga graduated in 1998 with a BSc (Hons) in Environmental Biology (Napier University) and in 1999 with an MSc in Environmental Management (University of Stirling). She is an Associate Member of the Institute of Environmental Management and Assessment.



**Keith Fairclough BSc**

Keith has been involved in practical conservation for over 30 years. He graduated from Lancaster University in 1973 with a BSc (Hons) in Biological Sciences, specialising in Ecology.

After several years as a secondary school teacher, he joined the Reserves Division of the RSPB in 1978. He came to Orkney in 1984 as the RSPB Hoy warden and progressed to the position of Senior Site Manager, which involved overseeing the implementation of management plans for the 14 RSPB reserves in Orkney. Keith became Special Projects Manager before leaving the society in 2007, to become an independent ecological consultant.



**John Flett Brown  
BSc DPhil**

John has more than 40 years experience as a professional geologist worldwide. Educated at Stromness Academy, Edinburgh University and University College Oxford. He lectured in the Geology Departments of Florida State University, USA and St Andrews University, Scotland.

Leaving academia in 1979, he entered the oil industry and became Chief Geologist and Exploration Superintendent for Mobil Oil Libya. Retiring in 1991 he continued as an independent geological consultant and furthered his academic interest in the lacustrine sediments of the Scottish Devonian. He has been a councillor on Orkney Islands Council, Chairperson of two fishing companies, Director of Environment and Resource Technology Ltd and on the North Board of SEPA.

Regarded as a local expert on Orkney geology, he has 34 academic papers, book chapters, internal reports and an Orkney geology website to his name.



***Captain David Thomson***  
***MNI***

David heads up Orkney Towage and is responsible for the management of the Harbour Authority seagoing tugs, pilot boats, and work boats. He is responsible for the operational management of the vessels and for the negotiation, fixing and preparation of towage contracts, as well as overseeing the administration of ISM Code, Safety Management Systems including investigation of incidents. David has sailed in command of a variety of vessels and has many years of experience as a marine consultant prior to his current post.

Due to a downturn in the oil tanker traffic using Scapa Flow, the resources of Orkney Towage are now being increasingly used to support marine renewables activities in Orkney and the Pentland Firth. Recent activity has included support for OpenHydro, TGL and Pelamis Wave Power. David therefore has an excellent overview of the marine operations needed to support tidal developments and of the marine issues that may arise. He also has access to the practical knowledge and experience of the tug boat crews.



***Kevin Dick MSc***

Since joining Aquatera at the end of 2007, Kevin has been involved in developing environmental awareness training materials for seafarers. Kevin has worked in the engineering departments onboard on a number of vessels, including Northlink Ferries and the Northern Lighthouse Board.

In 2007, he completed an MSc in Renewable Energy Development at the Heriot-Watt International Centre for Island Technology (ICIT) during his weeks on leave, and he now works part time for Aquatera alongside his maritime activities.



***Mike Walker***

Mike is Managing Director of Northstar New Media, Aquatera's IT and multimedia partner. Mike has established an extremely strong collaborative relationship with Aquatera over the last 10 years.

He has a wealth of multimedia programming skills and public relations experience upon which to draw. He has been at the core of all Aquatera's ICT and multimedia developments over recent years, and has also provided services to the European Marine Energy Centre (EMEC) and associated specific technology developers.



***Kevin West BSc***

Kevin has worked with Aquatera since September 2007. He is responsible for the company's promotional materials, marketing and PR, and maintenance of the company website. He is also involved with project-related public engagement and user acceptance testing of Aquatera's multimedia products.

He also works as a freelance medical communications writer, having previously worked for over six years at Thomson Scientific as Senior Editor on a suite of competitor intelligence and business information databases about the pharmaceutical industry. Kevin also has two years' experience as Senior Project Manager in a medical communications agency and six years' experience in pharmaceutical R&D. Kevin graduated from the University of the West Of England, Bristol, in 1993 with a BSc (Hons) in Applied Biological Sciences, specialising in Pharmacology, Mammalian Physiology and Molecular Biology of the Gene.



***Elspeth McLellan***

Elspeth McLellan started at Aquatera in April 2003 and was responsible for all of the administrative and financial related duties for the company until April 2006.

In April 2006, she became self-employed and continued her services to Aquatera on a part-time basis, continuing to deal with all aspects of the Aquatera finances, along with some administrative support when required.



***Alastair Gray CA***

Alastair is a finance graduate and qualified Chartered Accountant. He has extensive business experience in a broad spread of industries as an accountant, finance director and board member.

From 1997 Alistair was a Board Member of Highlands and Islands Enterprise (HIE) and for six years was involved in a wide variety of economic and community projects. During his time with HIE he served on a number of sub-committees dealing with several high-profile cases. He was chairman of the Internal Audit Committee from 2000 to 2003, and in August 2005 he was appointed to the Board of the European Marine Energy Centre (EMEC).

Alistair has a wide variety of experience in all areas of business development and is currently involved in a number of Orkney-based wind turbine developments.



***Tamsin Bailey***

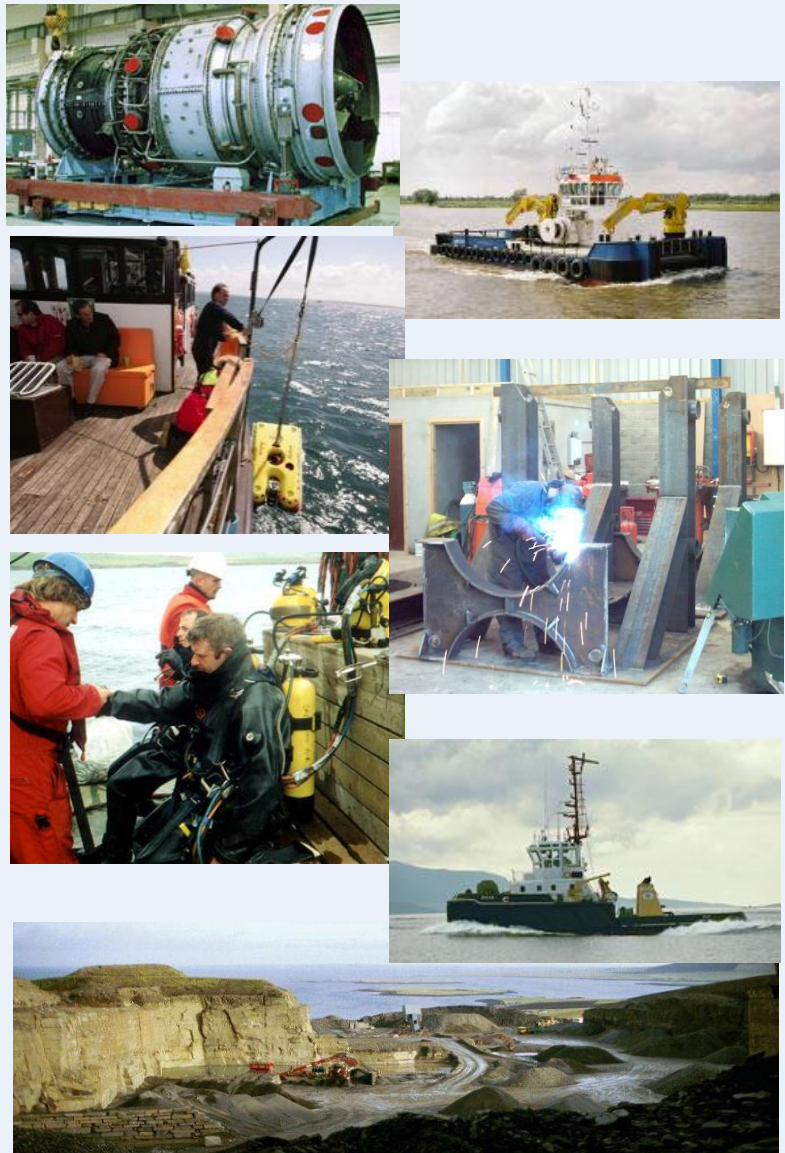
Tamsin has a broad range of experience in the private, public and voluntary sectors. She worked as a planning and environment solicitor in London, before spending five years in Brussels, initially as a journalist and then in the food industry, focusing on environmental policy.

She became Director of Public Affairs and Planning for the Design Council back in London and then moved to Scotland in 2002 to be Head of Public Affairs and Marketing for RSPB Scotland. Tamsin has worked as an independent consultant in Orkney since 2007, specialising in communications and environmental policy.

## Collaborating Companies

Company	Brief Description
Currie Brothers Ltd	Currie Brothers offers a wide range of civil engineering, coastal engineering, haulage services and facilities. The company has recently been involved in the fabrication and installation of the OpenHydro's Open-Centre Tidal Turbine at the European Marine Energy Centre (EMEC) tidal energy test site at the Fall of Warness, Orkney.
Delta Marine Ltd	Established in 1985, Delta Marine Ltd is a tug and workboat operator, chartering vessels to the dredging and marine civil engineering industries. Main areas of operation include: UK Coast, Scandinavia, Baltic States, Caspian Sea and the Mediterranean Sea. The vessels are all specially designed for coastal construction, anchor handling and towing contracts. They are powerful tugs, yet shallow drafted for inshore operations.
Orkney Towage Co Ltd	Orkney Towage is primarily engaged in providing the towage services for the oil port of Scapa Flow. It has also been involved with a number of the early deployments of renewable energy devices in Orkney. Each tug has an experienced and well trained crew of five: Master, Mate, Chief Engineer, Deckhand and Cook/Deckhand, all certified to STCW 1995.
Orkney Aggregates Ltd	Orkney Aggregates Ltd was formed in July 1999, following acquisition of assets from Orkney Builders Ltd who had been in the quarrying/concrete business since 1964. The principal activities of the company are quarrying, ready mix concrete, blocks, precast, haulage hire and plant/container/accommodation sales and hire. Its employees have invaluable experience of the company and its products, ensuring a high level of service throughout the company.
SULA Diving	SULA Diving is located at the Old Academy in Stromness, next door to the EMEC offices. Its core activities focus around the provision of marine survey and hyperbaric related services. Its core staff team are all qualified divers and marine biologists who have extensive knowledge of the marine environment, having worked in Orkney for many years. The company largely specialises in projects requiring special scientific input.
Leask Marine	Leask Marine started operations in 1985 to meet the demands of a construction program for new piers around the Inner and Outer North Isles in Orkney, as well as Kirkwall Harbour, Stromness Harbour, Houton Terminal and Flotta. The company also undertakes much of the ongoing maintenance and upgrading work on these piers. The company's skills base includes: underwater burning and welding, shuttering, concreting, placement of pre-cast concrete units together with all the budget and man-management requirements prevalent in large construction projects. Leask Marine's previous contracts include scientific surveys, underwater inspection, construction to aquaculture and renewable energy projects.

Company	Brief Description
Roving Eye Enterprises	Roving Eye has over ten years' experience as a provider of cost-effective remotely-operated vehicle (ROV) equipment and parallel small work boat services in a variety of industries. The company can conduct ROV surveys for pipelines, cables, jetties, piles, seabed and hulls. It can also co-ordinate a complete survey package, including multi-beam, bottom sub profiling, side scan sonar and acoustic Doppler current profile (ADCP).
Combustion, Energy and Steam Specialists Ltd	Combustion, Energy and Steam Specialists Ltd (CESS) was formed in 1990. Based in Stromness, Orkney, it has rapidly become one of the world's leading sourcing, valuation and marketing agents, and suppliers of surplus and advance-order power plant and related equipment. CESS also offers a turnkey service on surplus plant, which ranges from evaluation and marketing, through to sale, decommissioning/ dismantling, relocation/shipping, re-erection and commissioning.

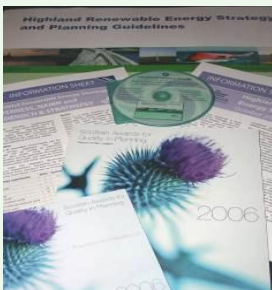


## Prize Winning Performance

As a company committed to innovation, Aquatera aspires to the highest levels of performance. The company's work has been assessed in a number of competitions leading to prize winning performance.



**2008 Entrepreneurship and Innovation Scholarship to Massachusetts Institute of Technology (MIT) Sloan Business School** – Aquatera was one of 3 companies from the Highlands and Islands to be awarded this business development scholarship. The weeklong course, which attracted 130 attendees, is the leading course of its type in the world. Aquatera's Managing Director, Gareth Davies, attended and was a member of the winning business development team, "Esteem".



**2007 Scottish Planning Awards Commendation** – The work that Aquatera completed for The Highland Council in developing a Renewable Energy Strategy was recognised through the Scottish Planning Awards. The judges commented that the work was *"a comprehensive tool that allows the Council to influence development in the long term both in terms of economic development and planning policy. We were impressed that the product is adaptable and can be developed in the future to suit changing circumstances. A substantial body of work was carried out over a relatively short period of time considering the detail that the document covers. We consider that this strategy will be a useful tool to the Council, developers and the community and will ensure clarity and consistency in decision making."*



**2003 Highlands and Islands Small Business of the Year Commendation** – From the outset of establishing Aquatera it was clear the company had high ambitions to be a top performer. This was recognised in 2003 when Aquatera was awarded this prestigious recognition. Many of the foundations that have served Aquatera so well were already laid at this stage in the company's development.



**2002 BP Helios Awards Commendation** – One of the very first contracts secured by Aquatera was to provide environmental support to the Magnus EOR project in the northern North Sea. This project later achieved a key Helios award for human endeavour and the environmental programme that Aquatera had done so much to inspire was rewarded with a special commendation. Many of the approaches adopted in the project have now been adopted as best practise within BPs activities.

## Key Client Experience

The success of Aquatera can be measured by the satisfaction and loyalty of its clients. The following is a list of key clients for whom Aquatera has successfully completed projects.

 <p><b>European Marine Energy Centre (EMEC)</b></p>	<p>Aquatera was actively involved with establishing the European Marine Energy Centre (EMEC) and carried out environmental scoping work required for the permitting of the facility's tide and wave energy test sites. The company was also instrumental in developing guidelines for the device-specific environmental impact assessment process that must be conducted prior to a developer deploying a device at one of EMEC's tidal or wave test site berths.</p>
 <p><b>OpenHydro Group Ltd</b></p>	<p>OpenHydro's Open-Centre Turbine has recently become the first fully installed device at EMEC's tidal energy test site. Aquatera has worked closely with OpenHydro throughout the preparation, installation and operational phases of its project. Services and/or products that Aquatera has provided to the company to date include: environmental statement (ES; including site-specific research), detailed installation and operation method statements, hazard identification and risk analysis (HIRA), global resource assessment, public information sheets, provision of marine superintendence and detailed bathymetry modelling.</p>
 <p><b>Pelamis Wave Power</b></p>	<p>Aquatera provided Pelamis Wave Power (PWP; formerly Ocean Power Delivery) with a variety of logistical, light engineering, marine operations, public relations and local communications support during its time at EMEC in Orkney. This work was done in conjunction with Scotrenewables. Subsequently, Aquatera provided environmental support (including an ES) for PWP's deployment of its Pelamis Wave Energy Converter device at the EMEC wave energy test site.</p>
 <p><b>Orkney Islands Council</b></p>	<p>Orkney Islands Council (OIC) has contracted Aquatera to conduct a diversity of environmental and energy projects. These include scoping studies for the OIC's sustainable energy strategy and a container hub on the island of Hoy. Also, for OIC and the Carbon Trust, Aquatera completed a technical and financial viability study for a commercial-scale windfarm project on Flotta. Aquatera has also provided OIC with software applications based on a Virtual Terrain Programme (VTP) to allow 3D visualisation of Orkneys landscape in various contexts, such as windfarm scenarios and transport infrastructure.</p>
 <p><b>BP</b></p>	<p>Aquatera has provided a range of environmental services and products to BP. One notable example is the Magnus enhanced oil recovery (EOR) project, for which Aquatera scoped seabed surveys and completed an environmental impact assessment (EIA). A range of awareness materials was also produced to ensure that BP's workers and the public understood the key environmental issues associated with the project and adhered to commitments outlined in the environmental statement (ES).</p>



**Shell**

Aquatera was contracted to assess and summarise all the environmental data collected in relation to Shell UK's UKCS/North Sea activities over the preceding 30 years. Data from a wide range of geophysical seabed studies and sediment sampling surveys were reviewed and summarised. Methodologies and sampling strategies were scrutinised, and the applicability and limitations of the available datasets was analysed, in order to identify and prioritise knowledge gaps and to guide development of future environmental survey strategies.



**The Highland Council**

Aquatera has conducted a number of environmental projects for The Highland Council. The majority of these were conducted in order to support the development of the Highland Renewable Energy Strategy. Types of project conducted by Aquatera include a renewable energy resource assessment (RERA), strategic environmental assessment (SEA), establishing zones of visual influence, working group support and analysis of consultation responses. The finalised strategy documents have now been formally adopted by the Highland Council.



**Fairwind Statkraft  
(Orkney) Ltd**

Aquatera provided Fairwind Statkraft (Orkney) Ltd with environmental surveying support in relation to scoping and proactive consultation for a proposed major onshore windfarm development in Orkney. Bird surveys were conducted at eight sites throughout Orkney's Mainland and South Isles. Also, a Virtual Terrain Programme (VTP) 3D visualisation tool was developed, in conjunction with NorthStar New Media, to allow proposed windfarm developments to be created and viewed on a virtual landscape.



**Agip KCO**

Agip KCO commissioned Aquatera to supervise a preliminary environmental impact assessment (EIA) for the Kashagan oil field in Kazakhstan to ensure that regulatory and project requirements were met. This nine-month project involved working alongside a local contractor, participation in regulatory and senior management meetings and extensive strategic planning. Aquatera has also provided Agip KCO with environmental awareness media for the northeast Caspian Sea, in the form of booklets and an interactive Caspian Explorer CD-ROM.



**Scotrenewables**

Aquatera provided technical guidance to Scotrenewables on how its prototype marine tidal generator device could potentially interact with, or impact upon, the environment. More recently, Aquatera completed the environmental scoping information contractually required for Scotrenewables' to deploy the device at the EMEC wave energy test site.



**Scottish and Southern  
Energy**

Scottish and Southern Electricity is researching and consulting on a proposal for a 132 kV connection between Orkney and Dounreay in Caithness, to distribute electricity from possible renewable energy developments in Orkney to the Scottish mainland. Aquatera has conducted a range of desk- and field-based studies to provide route options, a preferred route on which to consult, and will carry out EIA studies on the proposed route as it becomes defined.

For further details of Aquatera's client base, please refer to **Aquatera Project History** on page 16 and also the Project Experience section of our website at [www.aquatera.co.uk](http://www.aquatera.co.uk).

## Aquatera Project History

The list below details a number of the projects and activities that Aquatera has undertaken over the last few years.

	Small = <£10,000	Medium = <£100,000	Large = >£100,000
Date	Client	Project	Scale of Project
2008	Voith Siemens	Tidal fouling and corrosion trials	Medium
2008	Internal	Baseline environmental surveys of Scapa Flow and the Pentland Firth, including ROV-assisted habitat mapping and sidescan sonar	Internal
2008	Scottish Hydro Electric Transmission Ltd	ROV and sidescan surveys along potential cable route and landfall sites	Medium
2008	Internal	Sustainable / Renewable Energy in Orkney Consultation Event	Internal
2008	BP	Environmental survey review	Medium
2008	Orkney Islands Council	Preliminary baseline environmental and physical surveys for a proposed transshipment container hub development	Medium
2007-ongoing	European Union	International Marine Environment Certificate (IMEC) e-learning project to promote environmental awareness to seafarers	Large
2007-ongoing	The Edrington Group	Development of a Site Operations Management Plan, habitat restoration and monitoring schemes for peat cutting operations at Hobbister, Orkney	Medium
2007-ongoing	Orkney Islands Council	Provision of electronic visualisation package for World Heritage Site, Orkney	Small
2007-ongoing	Voluntary	Director and Chairman of the Orkney Renewable Energy Forum (OREF)	Voluntary
2007-ongoing	Voluntary	Scottish Renewables Forum (SRF) Board member and Co-Chair of SRF Marine Group	Voluntary
2007-8	Scottish Hydro Electric Transmission Ltd	Route selection studies for new 132 kV grid connection between Orkney and Dounreay	Large
2007-8	Rio Tinto Brazil	Preliminary EA for ship-to-ship transfer of iron ore and coal near the River Plate, Uruguay	Large
2007-8	Orkney Islands Council	Environmental scoping report for a proposed transshipment container hub development	Medium

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2007-8	Orkney Harbours	Environmental screening of liquefied natural gas (LNG) ship-to-ship transfer operations in Scapa Flow	Medium
2007	Fairwind Statkraft (Orkney) Ltd	Undertaking EIA studies for eight individual wind turbine clusters which when integrated will make up a 126 MW renewable energy scheme in Orkney	Large
2007	Ocean Navitas Ltd	EIA for wave energy device deployments at Milford Haven and Alderney	Small
2007	OpenHydro Group Ltd	Completion of a risk assessment report and HIRA process for a cable move and turbine replacement at the Open-Centre Turbine test rig at the Fall of Warness, Orkney	Small
2007	Scotrenewables Ltd	Compilation of a scoping report for deployment of a floating tidal turbine at the EMEC test centre	Small
2007	The Highland Council	Preparing and giving evidence at a public enquiry into two windfarm projects	Medium
2007	Ramco Energy plc	Assessment of market development potential in a specialist area of business related to renewable energy	Small
2007	Internal	Travel to Washington DC as part of a delegation from Scotland visiting the World Bank and the Inter-American Development Bank organized by Scottish Development International	Internal
2007	Ocean Power Technology Ltd	Resource and technical feasibility assessment around to identify prospective sites for future deployments	Medium
2007	Local landowner	Investigation into visibility and landscape impacts associated with a single turbine development alongside five others at Burgar Hill, Orkney	Small
2007	Highlands and Islands Community Energy Company (HICEC)	Investigations into bird populations and behaviour around a number of community wind turbine sites in Orkney	Small
2007	Orkney Islands Council and The Carbon Trust	Feasibility study into the potential deployment of a wind turbine adjacent to the Flotta Oil Terminal, Orkney	Small
2007	BP and Rosneft Oil Company	Feasibility of using drill cuttings in brickwork, concrete and artificial soil make-up in Sakhalin Island, Russia	Large

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2006	Orkney Islands Council	Development of a sustainable energy strategy for the Orkney Islands	Medium
2007	Orkney Islands Council	Co-ordination of consultation on a vision for a sustainable energy strategy for the Orkney Islands	Small
2006	Ocean Power Technology Ltd	EIA for deployment of a wave power device at EMEC, Orkney	Small
2006	Agip KCO	Production of environmental awareness posters in English, Russian and Kazakh	Small
2006	OpenHydro Group Ltd	Facilitation of risk assessment processes related to the deployment of the Open Centre Turbine at the EMEC test centre, Fall of Warness	Medium
2006	OpenHydro Group Ltd	Various site inspections and wildlife surveys associated with the deployment of the Open Centre Turbine at the Fall of Warness	Small
2006	Fairwind Statkraft (Orkney) Ltd	Development of a scoping document to support the formal planning process for major windfarm in Orkney	Medium
2006	Fairwind Statkraft (Orkney) Ltd	Completion of detailed bird surveys on Hoy and Fara, in relation to possible windfarm developments	Medium
2006	BP Rosneft Oil Company	BPEO for exploration drilling in Sakhalin, Russia	Large
2006	BP Aberdeen	Review and guidance of environmental survey techniques for activities across the UKCS	Medium
2006	BP Bruce	Seabed survey strategy for the Bruce field area	Small
2006	Fairwind Statkraft (Orkney) Ltd	Support in community consultations about windfarm proposals for Flotta and Hoy, Orkney	Medium
2006	BP, Deep-water Performance Unit	Assessment of seabed survey requirements west of Shetland	Small
2006	Melbourne Marine Services Ltd	Preparing information to establish the need, and to inform any required Appropriate Assessment, for ship-to-ship (STS) transfers in the Firth of Forth	Medium
2006	The Highland Council	Analysis of consultation responses to the draft renewable energy strategy for the Scottish Highlands	Medium
2006	The Highland Council	Completion of a Strategic Environmental Assessment (SEA) for renewable energy developments in the Scottish Highlands	Medium
2006	OpenHydro Group Ltd	Global marine energy resource assessment	Small

Date	Client	Project	Scale of Project
2006	Orkney Islands Council	Visualisation of windfarm development scenarios in Orkney	Small
2006	The Edrington Group	Production of an Environmental Statement for peat cutting operations at Hobbister, Orkney	Small
2006	Statkraft AS	Marine energy resource assessment for northwest Europe	Medium
2006	OpenHydro Group Ltd	Producing a device-specific EIA for technology deployment at EMEC	Small
2005	Fairwind Statkraft (Orkney) Ltd	Preparing a 3D visualisation of the Orkney landscape and associated windfarm planning functions	Medium
2005	Scotrenewables Ltd	Site surveys for various potential windfarm development sites throughout Scotland	Small
2005	Orkney Islands Council	Scoping study for a sustainable energy strategy	Small
2005	Isle of Man Council	Resource assessment for marine renewable energy around the Isle of Man	Medium
2005	Orkney Islands Council	Environmental awareness calendar for the Orkney community	Small
2005	Statkraft AS	Preliminary advice over the deployment of a tidal energy device in Orkney	Small
2005	Tulloch Prime Contracting Ltd	Seabed survey organisation and management for the Fall of Warness, Orkney	Medium
2005/6	The Highland Council	Support in the formulation of a renewable energy strategy for the Scottish Highlands	Large
2005	Wavegen	Coastal wave energy resource study for Ireland and Scotland (including Orkney)	Medium
2004	Forth Ports plc	Update to the Clearwater Forth oil spill contingency plan	Small
2004/5	Melbourne Marine Services Ltd	EIA for ship-to-ship (STS) transfer operations in the Firth of Forth	Large
2004	Melbourne Marine Services Ltd	Environmental risk assessment for bulk oil handling in the Firth of Forth	Small
2004/5	European Marine Energy Centre	Scoping and planning a standards development process for marine renewable energy technology	Small
2004/5	Fairwind AS	Preliminary advice and support in planning an expanded renewable energy capacity for Orkney	Small

Date	Client	Project	Scale of Project
2004	The Highland Council	Renewable energy resource assessment for The Highland Region	Large
2004	Tullochs Prime Contracting Ltd	Investigations into the scope of work required to establish a tidal energy test site in Orkney	Small
2004	European Marine Energy Centre	Development of EIA guidance procedures for testing marine renewable energy devices in Orkney	Small
2004	European Marine Energy Centre	Scoping report for the environmental works associated with development of a tidal test site at the Fall of Warness, Orkney	Small
2004	Orkney Tourism Board, Orkney Enterprise and Orkney Islands Council	Production of an interactive 3D model to enable the visualisation of Orkney's landscape	Medium
2004	Voluntary	Facilitation of standards workshop for marine renewable energy technology at EMEC's official opening	N/A
2004	Voluntary	Facilitation of a workshop to review key issues associated with renewable energy planning in Orkney	N/A
2004	Scottish Community and Householder Renewables Initiative (SCHRI)	Feasibility study into establishing a renewable energy garden in Stromness	Small
2004-ongoing	Ocean Power Delivery (now Pelamis Wave Power)	Ongoing environmental support and advice regarding deployment of the Pelamis Wave Energy Converter device in Orkney	Small
2004	Ponte D'Archimede International SpA	Advice and support in planning the deployment of Kobold II tidal energy device in Orkney	Small
2004	Orkney, Shetland and Western Isles Councils	Preparation of a leaflet about renewable energy and grid capacity related to the Northern and Western Isles of Scotland	Small
2004	Internal	Organisation of the Renewable Realities 2004 Virtual Exhibition	Medium
2004	Orkney Enterprise	Business plan/feasibility study for a research and teaching establishment in Stromness	Medium
2004	European Marine Energy Centre	Preliminary EIA and scoping study for the tidal energy test site at Fall of Warness, Orkney	Small

Date	Client	Project	Scale of Project
2004	Stromness Community Business Forum	Feasibility study for a possible Renewable Energy Garden in Stromness	Small
2003/4	European Marine Energy Centre	Branding and publicity materials for the newly established European Marine Energy Centre	Small
2003/4	Orkney Enterprise and Shetland Enterprise	Renewable energy resource assessment for Orkney and Shetland	Medium
2003/4	Agip KCO	Design and production of environmental awareness materials in two languages (posters, brochures and leaflets)	Medium
2003	Ocean Power Delivery (now Pelamis Wave Power)	Environmental assessment for deployment of the Pelamis Wave Energy Converter device	Small
2003	BP	Providing corporate environmental support to the Exploration and Production Segment	Large
2003	Orkney Sustainable Energy Ltd	Preparation of landscape models for proposed windfarm developments	Small
2003	Scotrenewables Ltd	Preparation of landscape models for proposed windfarm developments	Small
2003	Orkney Islands Council	Baseline review of environmental conditions on the Golta Peninsula for the proposed container hub	Small
2003	Agip KCO	Design and production of a computer-based interactive explorer programme in three languages	Medium
2003	Orkney & Shetland Touring Company	Preparation of a preliminary EIA for a hotel ship project in Stromness	Small
2003	Internal	Organisation of the Renewable Realities 2003 conference	Medium
2002	Scottish Natural Heritage	Preparation of a model of the Vadills coastal lagoon system	Small
2002	BP	Preparation of the 2003 environmental calendar for the northern business unit	Small
2002	Internal	Organisation of the Renewable Realities 2002 conference	Medium
2002	Agip KCO	Activities to support preparation of EIA materials for the Kashagan Project	Large
2002/3	BP	Design and production of an atlas of deepwater animals	Small

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2002	BP	Evaluation of offshore sampling techniques	Small
2002	Orkney Enterprise	Study of potential for LPG supply to Orkney	Small
2001/2	Agip KCO	Project management of activities to produce the preliminary EIA for the Kashagan Project, Kazakhstan	Large
2001	BP	Preparation of an environmental calendar for the West of Shetland business group	Small
2001	Orkney Health Board	Preparation of promotional banners for the "Excellence of the Edge" conference, held in Kirkwall in August 2001	Small
2001	BP	Preparation of an interactive CD ROM of seabed photos and video material for the West of Shetland and Magnus EOR areas	Medium
2001	BP	Establishing scopes of work for acoustic and seabed surveys associated with the operational phase of the Magnus EOR project	Small
2001	Offshore Kazakhstan International Operating Company (OKIOC)	Feasibility study for establishing a chemical laboratory in Atyrau, Kazakhstan	Medium
2001	BP	Contributing to the preparation of EIAs for the Svinoy and Assynt exploration wells in the Faroe-Shetland Channel	Large
2001	BP	Preparation of Solitaire pipelay vessel cut-out model for raising public awareness (targeted at school children) for Magnus EOR project	Medium
2001	BP	Preparation of environmental awareness calendar for Magnus EOR project	Small
2001	BP	Preparation of multimedia environmental awareness CD presentation for Magnus EOR project	Medium
2001	BP	Preparation of environmental awareness posters for Magnus EOR project	Small
2000	Offshore Kazakhstan International Operating Company (OKIOC)	Assessment of long-term strategies for handling aqueous waste from NE Caspian Sea oil production operations	Medium
2000	BP Amoco	Production of a video illustrating the seabed conditions along the EOR pipeline route	Medium

Date	Client	Project	Scale of Project
2000	BP Amoco	Onshore EIA for the Magnus EOR project	Medium
2000	BP Amoco	Devising a seabed sampling strategy for special sites along the Magnus EOR pipeline route	Medium
2000	BP Amoco	Offshore EIA for the Magnus EOR project	Large
2000	Kvaerner Environmental Ltd	Design input into a set of 4 posters depicting environmental management of oil exploration in the NE Caspian Sea	Small

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