

COMMUNICATION HUB FOR THE WIND ENERGY INDUSTRY

HUMBER UPDATE

# WindEnergy

ISSUE 35 - 2016 | £7.50

NETWORK

**CABLE  
INSTALLATION**

**BOLTING &  
FASTENINGS**

**OILS &  
LUBRICATION**

**HUMBER SPECIAL EDITION**

# CONTENTS

- 04 Cable Installation
- 14 Quo Vadis Event
- 22 Oils & Lubrication



- 26 Bolting & Fastenings
- 32 MTE Company Interview
- 34 Humber Update



## HUMBER UPDATE SPECIAL EDITION

Welcome to our special edition which has been almost entirely devoted to the Humber area which we have visited on numerous occasions since our first introduction to the area 7 years ago. You will find the most expansive feature yet covering more than 80 pages. A major catalyst to the area experiencing unprecedented wind energy industry growth is the new Siemens facility however it is the enthusiasm of the now vibrant supply chain as a whole which has been a joy to behold.

### PERSONAL THANKS

May I personally take this opportunity to thank everyone who has contributed – it is greatly appreciated. We could not have produced the substantial feature without you.

### FEATURE SECTIONS

With such a large feature we decided to give it a structure so we have broken it into sizeable sections.

Please enjoy finding out yourself what the region offers by reading this most interesting substantial feature.

### OTHER FEATURES

We have however managed to find space to include 3 more features...

- Cable Installation
- Bolting & Fastenings
- Oils & Lubrication

Duncan McGilvray  
Editor | Wind Energy Network



Fliss - Editorial



Duncan - Editorial



Carly - Sales



Rosie - Sales



Marcus - Design



Carole - Accounts

**GET IN TOUCH**  
 T 01765 644224  
 W [www.windenergynetwork.co.uk](http://www.windenergynetwork.co.uk)  
 E [duncan@greenenergypublishing.co.uk](mailto:duncan@greenenergypublishing.co.uk)  
 E [sales@greenenergypublishing.co.uk](mailto:sales@greenenergypublishing.co.uk)

**GREEN ENERGY PUBLISHING LTD (SOUTHERN)**  
 OrbisEnergy, Wilde Street, Lowestoft, Suffolk NR32 1XH

**GREEN ENERGY PUBLISHING LTD (NORTHERN)**  
 The Oaks, Oakwood Park Business Centre,  
 Bishop Thornton, Harrogate, North Yorkshire HG3 3BF

FSC  
www.fsc.org  
MIX  
Paper from responsible sources  
FSC® C017177

Wind Energy Network magazine is happy to accept unsolicited contributions for consideration. Editorial opinions expressed in this magazine are not necessarily those of Green Energy Publishing Ltd and the company does not accept responsibility for advertising content. The publishers cannot accept any responsibility for omissions or errors. The contents of this magazine are fully protected by copyright and may not be reproduced without written permission.

recycle

## Installing fibre optic and power cables for the offshore energy sector

Download the free Global Marine app. Hold your device over the images to see the C.S. Sovereign and the Q1000 brought to life.

SEARCH FOR GMSL APP

ANDROID APP ON Google play

Available on the iPhone App Store

[globalmarinesystems.com](http://globalmarinesystems.com)
[sales@globalmarinesystems.com](mailto:sales@globalmarinesystems.com)
+44 (0)1245 702000

# SCORE Grants for innovation in offshore renewable energy

**£6million** grant programme, part funded by the European Regional Development Fund.

For development of innovative technologies and solutions in offshore renewable energy.

Grants available from **£2,500 to £50,000** for up to 40% of eligible costs.

Companies must be based in England, with the 'economic benefits' being primarily in Cambridgeshire, Essex, Norfolk and Suffolk.

You should have fewer than **250 employees**. Less than **€50million** in assets.

# WINDPROS

t: +44 (0) 1502 563368  
 e: [SCORE@scoregrants.co.uk](mailto:SCORE@scoregrants.co.uk)  
 w: [scoregrants.co.uk](http://scoregrants.co.uk)

# THE BENEFITS OF SHARING MARINE MAINTENANCE COSTS

We introduce Global Marine Systems our sponsor for this feature who are regular contributors. Stephen Holden their Maintenance Account Director explains the concept...

The proliferation of power cables in submarine applications has been fairly limited until recent years, at least in comparison with telecoms cables, which extend for hundreds of thousands of kilometres across the sea beds of the world. Indeed, most of the power cables that exist are fairly short in length, largely fulfilling national or short haul international requirements. With this in mind, power cable repair has until now been a specialist market centering on the hiring and mobilising of VOOs (vessels of opportunity) or framework agreements.

## INDUSTRY GROWTH

With increasing awareness of climate change and the subsequent desire for more renewable and cleaner power sources, there has been a big push in recent times for the development of offshore wind capacity. This has led to a significant increase in power cable sea bed kilometres to service and connect windfarms to their respective national grids. In the European region, there has also been an increase in the number of international links.

The upshot is an increased risk profile for power cables, and correspondingly more faults, whether from manufacturing or from third party aggression. Consequently, there has been a marked increase in the number of insurance claims.

## REPAIR COSTS

Power cable repair costs are frequently in the multiple of millions. This is because such projects necessitate the diversion of a specialist installation vessel from its existing activities, and more often than not, sail it from a distant location. Furthermore, depending on the installation equipment already mobilised, it may be necessary to have a period of reconfiguration prior to commencing the power cable repair. Alternatively, the deployment of a VOO means having to locate and mobilise specialist equipment, such as chutes, tensioners and jointing equipment prior to sailing.

Correspondingly, everything has to be demobbed after the operation, with these activities requiring the cable owner or insurer to cover the cost of the VOO while this takes place, which could cost anywhere between £65,000 and £150,000 per day. Assuming a seven-day mobilisation/configuration, and corresponding demobilisation, the pre- and post-operational activities can cost anywhere from £0.91 million to £2.1 million, even before sailing to the fault site and undertaking any surveys, inspection or repairs.

These costs do not even consider the cost of service interruption; this was calculated for a 300MW UK windfarm in November 2014 by Transmission

Investments LLP to be in the region of £3 million to £12 million per month depending on the number of export cables available for transmission back to the grid. In this instance, the higher figure is where only one export cable services the windfarm, while the lower figure represents two cables.

## INTEGRATION OPPORTUNITY

Since the telecoms boom in the late 1990s and early 2000s resulted in the oversupply of vessels, the price that the industry is willing to pay for maintaining telecoms cables has in real terms either remained the same or decreased markedly. This has led to a significant reduction in replacement tonnage and the rapid aging of the world's telecom installation and maintenance fleet. However, by integrating the maintenance of power cables with telecom cables, there is a great opportunity to share assets and the related cost base while allowing vessel owners to increase profitability and generate sufficient return on their investment to convert or build new dual-use tonnage.

This would allow power cable owners to see a reduction in their repair costs, while telecoms cable owners would secure enhanced tonnage with the benefit of DP2 becoming the standard. This enhancement would allow for easier servicing of existing telecoms cables where they are in close proximity to offshore renewables infrastructure.

and 10 times heavier, which necessitates different handling equipment. They are also much more sensitive to crush (side wall pressure) when being moved and therefore require cable tensioners with moulded trackways over standard wheel pairs and cable drums traditionally used in telecoms.

## INTEGRATING MARKETS

Among the telecoms vessels that can operate in both markets and already boasts an impressive record is Global Marine's C.S. Sovereign. Global Marine is also undertaking a feasibility study to convert one of its maintenance telecoms vessels to enable it to undertake both power and telecoms repairs within the standard telecommunications mobilisation times of 24/36 hours. This, along with the provision of a readily available pool of qualified power jointers, would be a world first. Additionally, the company is looking to develop a universal (range) type joint to make connecting different power cables easier, without the need for cable jointing technology from specific manufacturers. It is estimated that there will be around

20,000km of power cable installed in northern European waters alone by 2030, which means that there are likely to be between 10 and 40 large cable repair projects in the North Sea annually by that date. Ultimately, the convergence of resources and skills will allow the offshore renewable market to maximise on the experience built from the telecoms market.

In the case of Global Marine, the company's portfolio includes an installed subsea cable base of over 300,000km, which equates to 22% of the world's total. The company has also performed 33% of all maintenance operations on the world's fibre optic cables.

In short, there are clear cost and availability advantages in repair convergence available to both power and telecom asset owners.

## Global Marine Systems



“POWER CABLE REPAIR COSTS ARE FREQUENTLY IN THE MULTIPLE OF MILLIONS”

## PRODUCT DIFFERENCES

Of course, there are some inherent differences in the products used and procedures deployed between maintenance contracts for telecoms and power cables. For a start, power cables are around five times larger in diameter



# OVERCOMING POTENTIAL DIFFICULTIES

Over the years Albion Manufacturing has gathered a reputation for high quality and reliability to the extent where many major cabling manufacturers and installers now seek the expertise Albion have amassed in the design and operation of cable pulling socks to help overcome the many potential difficulties that may be faced during cable installation projects.

## ADAPTING TO SPECIFIC PROJECTS

The company are constantly looking at new designs and innovative ways to adapt their products to suit specific projects or methods of cable installation. Recently they have supplied a large number of bespoke products to engineers working on a major offshore windfarm array and export cable project in the Baltic sea. These products include lace up and closed body Chinese fingers all with bound eyes (i.e. no ferrules) with many having plaited necks of up to 5 metre long.

These specialist items have provided a successful solution to their client who are using long J-tubes with limited internal clearance as part of their offshore cable installation project.

## MANUFACTURE

Albion are also currently midway through manufacturing many hundreds of Chinese fingers from non-conductive materials for turbine tower cable installations running to the turbine nacelle for another major windfarm project.

The company is fortunate enough to have live enquiries or orders for most of the windfarms constructed, or under construction around Europe in the last few years, as well as their European activity in exporting to various projects worldwide.

## GROWING CLIENT RISK

*"We are proud to be able to name most of the major cable manufacturers and installers working on offshore projects on our growing client list."*



*"With the many windfarm projects both under construction and in planning we are hopeful that our future will remain bright. Being based near the Norfolk coastline in the UK we are ideally placed geographically."*

*"Cable grips are niche products and knowledge of how variations of design and construction can affect performance is not widely understood hence why we are often approached by the cable manufacturers and installers to provide recommendations and guidance in determining the correct designs for their specific application."* Managing Director, Martin Nix concluded.



**Albion Manufacturing**

# CONTRACT AWARD

## For Dong Energy's Hornsea Project one windfarm

JDR, a leading supplier of subsea power cables and umbilicals to the global offshore energy industry, has been awarded a contract by DONG Energy to supply subsea power cables for the Hornsea Project One.

## WORLD'S LARGEST OFFSHORE WINDFARM

With a total capacity of 1.2 gigawatts (GW), Hornsea Project One will be the world's largest offshore windfarm and the first to exceed 1 GW capacity. The project is located 120 kilometres (km) off the Yorkshire coast and will meet the electricity needs of well over 1 million UK homes.

## CONTRACT DETAIL

The contract – which is the largest array cable award in JDR's history – will see the company design and manufacture 242km of array cables, covering two thirds of the total windfarm capacity. The company will also provide terminations, hang-off arrangements and additional accessories as well as services at the site.

## COLLABORATION

JDR CEO, David Currie commented: *"This contract award demonstrates our leadership position in the array cable market and is the second award to date for JDR under our partnership agreements with DONG Energy. Our collaboration is encouraging technology*

**MaXcess Access Systems**  
Improving the safety and weather limits of offshore transfers.

Each system is bespoke, with active and passive options to suit various vessel sizes and applications.

+44 (0) 1434 682 505  
team@osbit.com  
www.osbit.com



*development to support technical and commercial cost reduction, which is a critical element of our long-term strategy. We are proud to play a key role in this world-leading infrastructure project and continue our dedicated support to ensuring success for DONG Energy."*

## MAJOR MILESTONE

Richard Turner, COO of JDR, added: *"Hornsea Project One is a major milestone for JDR as it is the largest array cable contract award in our history. It is also a significant step*

*towards the Government's aspirations to increase the role of renewable energy in the UK's energy mix."*

## GOVERNMENT SUPPORT

Baroness Neville-Rolfe, UK Energy Minister, commented: *"We are building a strong, competitive UK supply chain to support our leading offshore wind industry. Businesses in the UK have greater certainty than ever before thanks to Government support."*

*"This agreement between JDR and DONG Energy is a great example of how this newfound certainty can drive local jobs and growth through the UK supply chain."*

## COLLABORATION AND FRAMEWORK AGREEMENTS

In 2016, JDR and DONG Energy developed a collaboration agreement to identify, develop and implement initiatives in key focus areas including health, safety, environment, quality performance and cost of electricity, including risk and schedule optimisation. The Hornsea Project One contract also follows the signing of an array cable framework agreement between the parties in June

2015 and the subsequent award of the Racebank offshore windfarm array cable contract in September 2015.

## PIONEERING PROJECT

Duncan Clark, Hornsea Project One Programme Director at DONG Energy, stated: *"Hornsea Project One is truly a pioneering project for the UK and for the electricity sector. When built, it will become the world's largest offshore windfarm by a considerable margin, helping to support Government ambitions to meet carbon reduction targets."*

*"We are committed to investing in the UK and it's great to award a significant contract like this to a UK-based company which we know offers high-quality design and reliable delivery in harsh offshore environments."*

JDR will manufacture the cables at its state-of-the-art facility in Hartlepool, UK, with batch deliveries scheduled for Q3 2018 and Q2 2019.



**JDR**

# INNOVATIVE CABLE PROTECTION SYSTEM CONTRIBUTES TO PERFORMANCE OF RENEWABLES



The way the oil and gas industry thinks about energy and renewables has transformed and it is no longer just a concept but a reality. As the industry continues to move further offshore, companies can short cut the development time needed for new concepts by transferring oil and gas industry knowledge and expertise to renewable energy.

With a long-standing commitment to serving the renewables market, Trelleborg recently launched NjordGuard, a cable protection system specifically designed for the renewables market to protect offshore windfarm power cables. Based

on a proven offshore application, the innovative system also improves safety and reduces installation complexity in both monopile and J-tube applications.

## MINIMAL ASSEMBLY

The system requires minimal assembly and can be installed, removed and reused without the need for remotely operated vehicles or diver intervention. This reduces installation complexity as the system has minimal parts and connections, further lowering the critical path time for installation to class leading standards.

The protection system can be configured to each contractor's particular deck layout or installation vessel,

simplifying installation activities for each specific vessel. To ensure ease of handling, the system has a smooth outer surface to reduce drag and snagging risks, improving on deck safety during installation.

## PROVEN INTEGRATED SYSTEM

The integrated system boasts class leading impact and abrasion resistance as it is manufactured using well established oil and gas materials with a long and successful track record. The reliability and durability of the system meets all installed-life requirements, is easily extendable and can be manufactured to meet any diameter cable.

By transferring proven products from the offshore industry to the renewables industry, Trelleborg is able to aid the growth in renewable energy, as well as improve installation efficiency and safety for offshore windfarm power cables.

## Trelleborg Group



Delivering offshore access systems On Spec, Budget and In Time





# SPOTLIGHT ON ANIMATION

Over the past year we have been introduced to the world of animation.

Artist impressions have been very useful to our industry in visually understanding what a project or equipment will look like in reality before construction but animation takes this to a whole new level.

We introduce animation specialists Kuro Dragon and founder, Stuart Howard by questioning him on their work in the industry. Please take some time to use the QR Codes/Links and the end of the article/online to see some examples.

## HOW MANY YEARS HAVE YOU BEEN IN THE ANIMATION INDUSTRY?

I started producing animations after leaving university 10 years ago, and over that time have built a strong reputation for animation work. This has led us on to work with the likes of large media companies such as ITV, Al Jazeera TV, Universal Music and News Corp. However in 2011 I decided to target the energy industry.

## WHAT ATTRACTED YOU TO THE INDUSTRY?

After visiting a couple of energy exhibitions in Aberdeen and the local area, I spotted an opportunity within the energy sector to improve the standard and quality of the marketing animations that were on display at these events.

## WHAT WAS THE FIRST PROJECT IN THE ENERGY INDUSTRY?

The first project we worked on in the sector was with MPI Offshore. We created a 5 minute bespoke animation demonstrating the vast capabilities of their vessel, MPI Adventure, which acted as a foundation for our work in the sector.

## WHY DO CLIENTS IN THIS INDUSTRY COMMISSION YOU?

Over the last 5 years we've had the pleasure to work with a number of

companies in the sector, gaining first-hand experience creating technical animation for the energy industry. We've also streamlined our ability to transition our client's complex CAD files into our software. This together with our developed understanding of the market means our clients can trust us to deliver their requirements. We've worked hard to build up a strong reputation producing high quality animations for the likes of DeepOcean, IHC, Global Marine, MPI Offshore, Fugro, SMD, JDR Cables and Costain.

## WHAT IS THE MOST UNIQUE PROJECT YOU HAVE WORKED ON IN THIS INDUSTRY?

As well as creating highly detailed technical animations we showcased our creative abilities when working with DeepOcean, creating a character led animation called The Deeplees. This animation featured key members of their management team and was used as an alternative to the standard corporate video. We had great fun working on this project and it was exciting to produce something so unique to the offshore industry. We particularly loved the outtakes – see QR Code/link.

## WHY DO YOU THINK ANIMATION IS SO IMPORTANT FOR BUSINESSES?

Animation is a visual storytelling medium that inspires and empowers both businesses and their clients. It also acts as the perfect medium for businesses to engage customers with their brand messages and stories. The feedback we've received from our clients indicates that the work we produce can be vital in helping them secure new business from their customers.

## WHAT DOES THE FUTURE HOLD FOR YOU AND KURO DRAGON?

At the moment we're currently working on a range of exciting projects for industry-leading clients. We want to continue to invest in the latest equipment to ensure we remain at the cutting edge of our industry and maintain our aim of being the number one supplier of animation to the energy sector.

## Kuro Dragon



# STEADYING THE SHIP

For the next wave of higher voltage subsea cables

The installation of subsea array cables within offshore windfarms can be particularly challenging due to the number of individual cables to install and connect, coupled with the typically shallow water depths found at offshore windfarm sites.

The array cables are becoming more vulnerable as the voltage increases from 33 kV to 66 kV, so managing their integrity throughout the installation process has never been more critical. Damage caused at this stage may not be immediately apparent, but could affect the performance and fatigue life of the cable, leading to unexpected and unpredictable OPEX from downtime and repairs.

Jee Ltd has carried out countless installation analyses for pipelines and flexibles since it was established in 1988. Over the past decade, the company has used its expertise to provide clients in the renewables industry with installation support such as cable lay-down and pull-in analyses for array cables in many windfarms around the UK and Europe.

## CASE STUDY – CABLE INSTALLATION ANALYSES

A windfarm developer approached Jee to complete installation analyses for cables within their windfarm. The windfarm contains two sizes of array cables which were surface-laid from the dynamic positioning (DP) vessel Normand Pioneer and then subsequently buried by an ROV. One cable was damaged during installation so a replacement needed to be installed.

The shallow water depth meant that the typical layback length of 3 to 3.5 times the water depth could not be achieved. Instead, a range of laybacks were tested starting from 1.5 x water depth. The company found that the cable was failing at the touchdown areas due to infringements of the minimum bend radius (MBR).

There was also concern at the transition between the bend restrictor (green section shown in figure 1 and figure 2) and the flexible cable when combined with the predicted tight bend due to the short layback. On top of this, the analysis showed that significant vessel motion was aggravating the condition.

Jee delivered the limiting sea states and dynamic lay tables for each of the cable and water depth combinations, then for a range of significant wave heights (Hs).

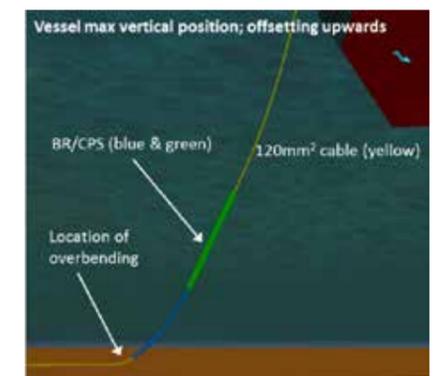


Figure 1 – Overbend location at vessel max vertical position

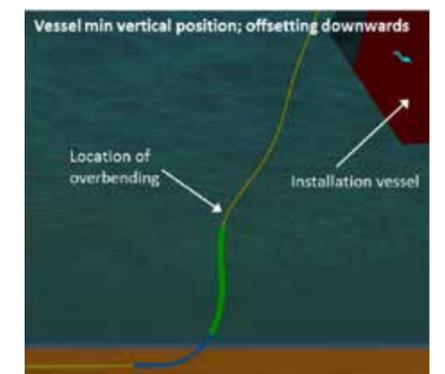


Figure 2 – Overbend location at vessel min vertical position

This was carried out for both normal lay and S-bight lay (for second end pull-in), including the effect of the bend restrictor on the cable.

## SUCCESSFUL WORKING RELATIONSHIP

The company's flexible and responsive working relationship with the client together with an embedded pragmatic approach ensured that all the parameters were considered without over-analysing the problem. The allowable sea states determined as a result of the study enabled the client to successfully install their cables with minimum downtime and lower risk to cable integrity.

## Jee Ltd





**Hydrography & Marine Support**

- Surface & Subsea Positioning
- Construction Support
- Hydrographic Survey
- ROV Inspection

T 44 (0)1208 77033 • [www.insight-marine.com](http://www.insight-marine.com)






# LAYING THE FUTURE FOR INTER ARRAY CABLE INSTALLATION

**Osbit Ltd, an expert in bespoke offshore engineering projects, has developed an advanced inter array cable lay system, which is delivering unprecedented levels of safety and efficiency.**

The company's back-deck expertise and technology led approach has enabled the supply of a state of the art deck layout to DeepOcean.

The system, which is installed on the Maersk Recorder vessel, has recently completed the first stage of its deployment at an east coast windfarm, for a leading international developer.

## INNOVATIVE DESIGN

Osbit specialises in delivering complex offshore equipment projects, working with its clients to incorporate often challenging requirements, to ensure outstanding operational performance.

To fit the vessel's space requirements, the company developed an entirely new deck layout, which incorporated operator-owned equipment alongside its own. It enhanced the system's functionality, with the inclusion of two stern chutes and associated grillages to ensure protection of the product at all times. A novel quadrant handling A-Frame was also integrated, to streamline the most complex handling operation in the lay cycle.

## GAME CHANGING EFFICIENCY

The system works to maximise technician productivity on board the vessel, by allowing cable production units to be assembled offline while laying operations are carried out.

The equipment is also crucial in minimising on-site costs. Osbit's design has had a major impact on deployment and pull in processes, increasing efficiency to achieve a lay rate of at least two complete cables per day, a class-leading achievement.

These features continue to support the safe and effective 1st and 2nd end deployment of the subsea quadrant, as it installs offshore windfarm inter array cables.

## COLLABORATION AND INNOVATION

Pierre Boyde, Commercial Director at DeepOcean, commented: "Osbit's understanding of our requirements and its engineers' expertise has produced one of the most advanced quadrant handling systems on the market. The

system gives DeepOcean an advantage over our competitors in multiple key areas, including speed, and personnel and product safety."

Brendon Hayward, Managing Director, added: "We continue to focus on developing new, technology-led solutions to support contractor operations in the construction of offshore windfarms. The success of this system highlights the effectiveness of the collaborative, objective-driven approach we apply in all of our projects, which ensures that our systems achieve productive offshore operations."

**Osbit**





**Always Innovating to Outperform**

Utility ROV Services pioneered the Subsea Tool Carrier, a single Utility system to power and control multiple subsea implements. Providing innovative and practical solutions to the Offshore Renewable and Oil & Gas markets, including:

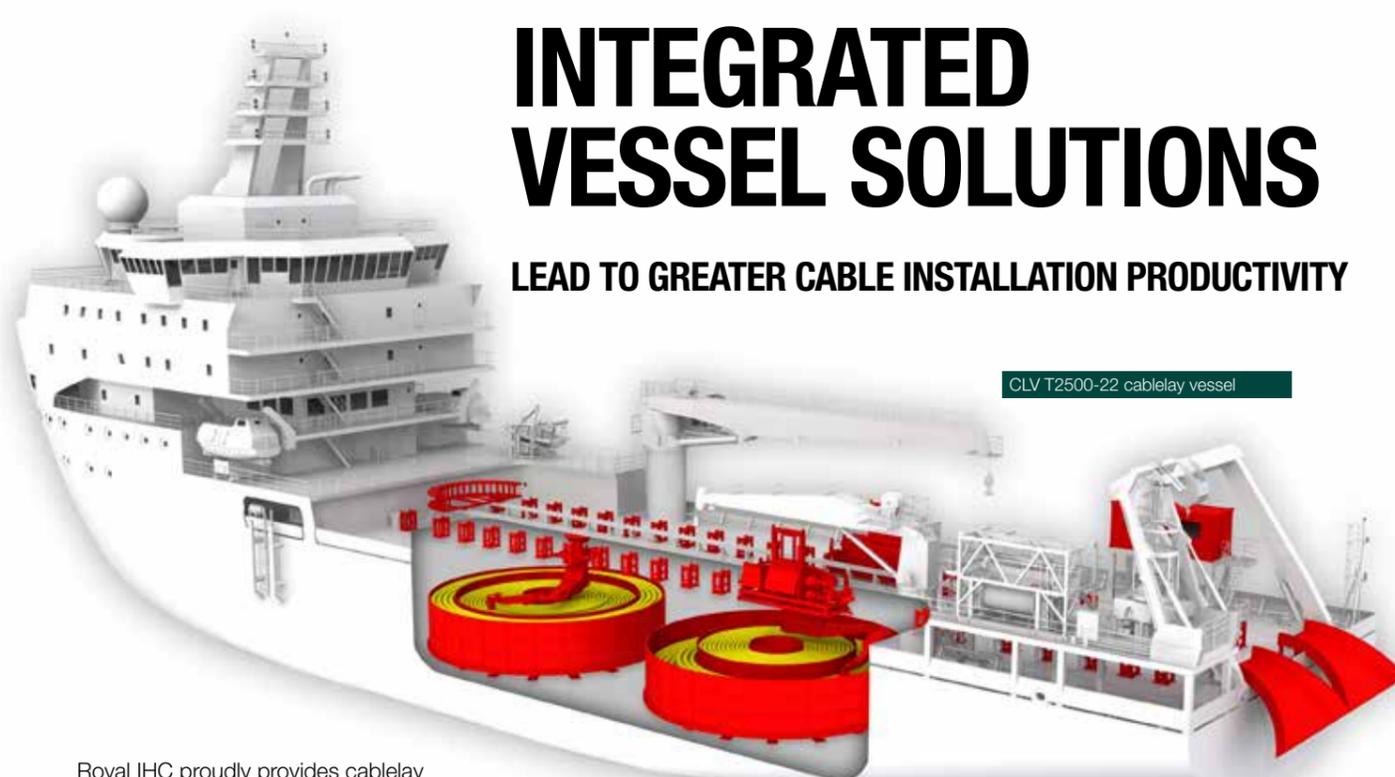
- Mattress Removal
- Mattress Lay
- Boulder Clearance / Route Clearance
- Survey, Video & Inspection
- Positioning Subsea Equipment
- Subsea Excavation/Dredging

www.utrov.com +44 (0)1592 77 33 44 enquiries@utrov.com



# INTEGRATED VESSEL SOLUTIONS

LEAD TO GREATER CABLE INSTALLATION PRODUCTIVITY



CLV T2500-22 cablelay vessel

Royal IHC proudly provides cablelay solutions for the offshore wind market. Their delivery scope ranges from design services to turnkey delivery of complete newly built cablelay vessels, spreads and existing vessel upgrades.

The CLV T2500-22 cablelay vessel is specifically designed for repeating sequences when installing large volumes of inter-array cable. It reduces costs of IAC laying operations by up to 30%. All stages of a cablelay operation have been taken into account, from load-out to burial of the cable into the seabed.

The quadrant system is placed in-line, eliminating the need to lay cable any further than necessary. Smart routing of the cable enables it to be laid over portside or starboard side for optimum heading during second-end pull-in.

## THE TECHNOLOGY INNOVATOR

IHC is continuing to develop new ideas to improve cable installation. On their carousels, they offer a hydraulic roller suspension system.

This technology provides superior load sharing capability over fixed rollers, increasing both carousel and vessel service life. They are more resilient to fabrication tolerances and deck flatness. Roller change-out is also much safer and faster.

The company has developed a patented, heave compensated cable deployment chute which increases the sea state at which cable can be safely laid.



Advanced Cable Plough 2 (ACP2)

## WINDFARM CABLE TRENCHING

Hi-Traq is the world's first subsea trencher specifically designed for the installation and burial of windfarm power cables. The harsh shallow water environments on the European continental shelf, present a special set of challenges for installation contractors. Hi-Traq, with its unique four-track chassis, provides enhanced steering and traction in the toughest environments. Hi-Traq is currently undergoing final assembly in readiness for testing and full operation early in 2017.

A flagship brand new system, the all-new Advanced Cable Plough 2 [ACP2] is the first in the offshore industry to be optimised for high performance in all areas but especially for the safe handling of large

diameter power cables. It accommodates products up to OD300mm with a 5m MBR. It offers simultaneous lay and trench and post lay trenching.

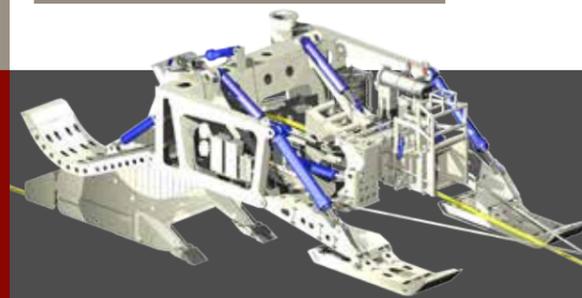
The ACP2 is designed to meet DeepOcean's specification and is destined for their state of the art power cable installation vessel Maersk Connector.

Royal IHC Engineering



## IHC Ploughs

The tool of choice for cable burial in the most demanding environments



The 3.3m trench depth power cable plough, ACP2, supplied to DeepOcean for their state of the art power cable installation vessel Maersk Connector

The technology innovator.

IHC Engineering Business  
ebl@royalihc.com  
www.ihceb.com

## ALBI-GRIPS & CHINESE FINGERS

A HIGHLY SUCCESSFUL AND COMPREHENSIVE RANGE OF CABLE GRIPS, CHINESE FINGERS & CABLE SUPPORTS DIRECT FROM THE MANUFACTURER



T: 01953 605983  
sales@albionmanufacturing.com  
www.albionmanufacturing.com



KURO DRAGON ANIMATION

+44 (0) 191 490 9126  
hello@kurodragon.com  
@kuro\_dragon  
@kurodragon  
www.kurodragon.com



Energy: A Balanced Future 2017 is a leading energy conference & exhibition that covers hot topics within the energy sector. It will address the need for a balanced energy mix in the UK to ensure we maintain a sustainable energy sector & ensure the UK is an attractive investment proposition.

We anticipate circa 450 energy sector professionals in attendance from across all levels of the supply chain making this an ideal place to find new clients, customers & suppliers on a personal basis.



# 10TH QUO VADIS CONFERENCE

PRAGUE, CZECH REPUBLIC

Prague was the location of the 10th Quo Vadis Conference, the annual gathering of windfarm owners and operators that is hosted by Kevin and Sigrid Donovan of GWA Supplies Ltd. The event, which was first held with a small group in Lowestoft in 2007, is unique in the industry as it is only for invited guests and excludes the turbine manufacturers, which in turn provides a great opportunity for owners and operators to share their knowledge and experience.

Kevin and Sigi take great pride in the fact that they offer the conference and the framework programme free of charge which is only possible because sponsors like ZF Services, DNV GL, Renewable Advice, Romo Wind, SKF, and others, help to pay for the costs.

## KNOWLEDGE SHARING

Sharing of knowledge amongst the delegates is particularly easy at Quo Vadis for two main reasons to ensure the format of the event and the family atmosphere

1. The event is spread over two days, with day one including a city tour and conference dinner
2. The conference being held on day two

This provides a relaxing setting with plenty of opportunities to network and catch up with all the delegates. The family atmosphere comes from the fact that many of the participants have been to previous events so it is an opportunity to reacquire with old friends and make new ones.

## HALL OF FAME

Many have been regular attendees, with some people actually having participated at all 10 conferences. These die-hards are recognised during the conference when Sigrid Donovan presents the Quo Vadis hall of fame which highlights the most frequent attenders. This year, Huw Smallwood (Tegni) and Steve Higman (REG Power Management) were acclaimed for having been to each of the 10 Quo Vadis events.

## SOCIAL

The delegates gathered on the Wednesday afternoon and were treated to a river boat tour of the city with local

Hall of Famers

“SHARING OF KNOWLEDGE AMONGST THE DELEGATES IS PARTICULARLY EASY AT QUO VADIS...”



guide Patrick giving a very colourful commentary on the passing sights, including his personal political view of the history of Prague, right up to the current president. The evening dinner was held on the 24th floor of the Corinthia Hotel, with a panoramic view over the city.

## CONFERENCE

The conference on day two included a range of speakers and the topics reflected the industry we work in – both maturing and continually innovating and included the following subject areas...

- Michael Wilkinson from DNV GL spoke on the topic of life extension of wind turbines, drawing interesting parallels with other energy sources including hydroelectric, nuclear and gas, which had all been the subject of extended performance periods greater than their original design life
- Dealing with ageing equipment has it challenges and we heard from RWE's Paul Sheldon about applying first principle engineering analysis to address problems on old generators
- Benn Faulkner from Renewable Advice gave a graphic account of how to do a major up tower repair on a blade that the owners had nearly written off as beyond repairable
- Gary McGougan from RES reminded us that whether it is mature or innovative, heavy things can be difficult to hoist, and therefore lifts need to be planned out carefully and implemented by experienced people

## ADDITIONAL PRESENTATIONS HIGHLIGHTING THE INNOVATIVE ASPECTS OF THE INDUSTRY INCLUDED...

- David Morgan of ZF gave an insight into the development of applying dynamic load monitoring equipment to gearboxes so that features such as active torque control can be incorporated into the turbine control system to avoid placing high stresses on the gearbox
- Alexander Strobel of SKF introduced us to hybrid bearings and how they avoid wear due to current leakage
- Markus Billman of the Fraunhofer Institute made us all glad that there is someone who understands electronics, working away on solutions for the industry while we all get on with our simple lives.
- Karl Fatrdla and Nigel Parlor of ROMO Wind presented a methodology for getting a more accurate method of measuring wind to enable the right corrective action to be taken thus getting the most out of the wind turbine

All of this was ably moderated by Clifford McSpadden (GWA Supplies) who ensured active involvement of the delegates throughout the day.

## 11TH QUO VADIS CONFERENCE

And finally, for those who were worried that Kevin and Sigrid might end on a high note with the 10th Quo Vadis, their doubts were cleared up as the 11th Quo Vadis date and location were announced – September 2017 in London.

Kevin and Sigrid Donovan  
GWA Supplies Ltd

# CONDITION-BASED LUBRICATION REDUCES ASSET MANAGEMENT COSTS

We introduce SKF, our sponsor for this feature who are regular contributors. Matt Preston, Lubrication Systems Application Engineer at SKF takes us behind the headline...

Given the operating conditions a wind turbine faces over a typical 20-year service life, maintenance problems aren't a question of 'if,' but 'when'. When those inevitable maintenance issues arise, windfarms are faced with the prospect of expensive crane mobilisation, lost energy production and the soaring costs of getting teams of maintenance technicians to site. The need to reduce overall operating costs is an important factor in any purchasing decision, especially now in the light of the planned withdrawal of the renewables obligation for onshore wind energy.

## ASSET MANAGEMENT PACKAGES

As a result, operators are showing increasing interest in more comprehensive asset management packages - implementing combined remote condition monitoring and automatic lubrication systems, for example, which can have a positive impact on operating life and maintenance cost reduction. Specifying such a condition-based lubrication system, either on a new turbine or as a retrofit, is becoming an attractive option for operators seeking to reduce running costs.

While sophisticated lubrication systems for wind turbines have typically been installed on larger turbines of 1.5MW and above, with manual lubrication costs accounting for as much as 10 per cent of the total servicing bill, they are now increasingly likely to be found on smaller turbines. Condition-based lubrication enables remotely monitored, automatic lubrication of a wind turbine's hard-to-access bearing systems, based on real-time bearing condition monitoring, reducing the frequency of on-site service engineer visits and potentially wasteful periodic, manual lubrication.

## AUTOMATED LUBRICATION SYSTEMS

The basic type of automated lubrication device is a single point gas-driven or electro-mechanical lubricator. However, while this offers a simple, easy-to-change solution, its life is normally limited to around twelve months. A more effective



option is an automated lubrication system, combining a refillable reservoir, pump and metering devices, feeding multiple lubrication points through a network of pipes.

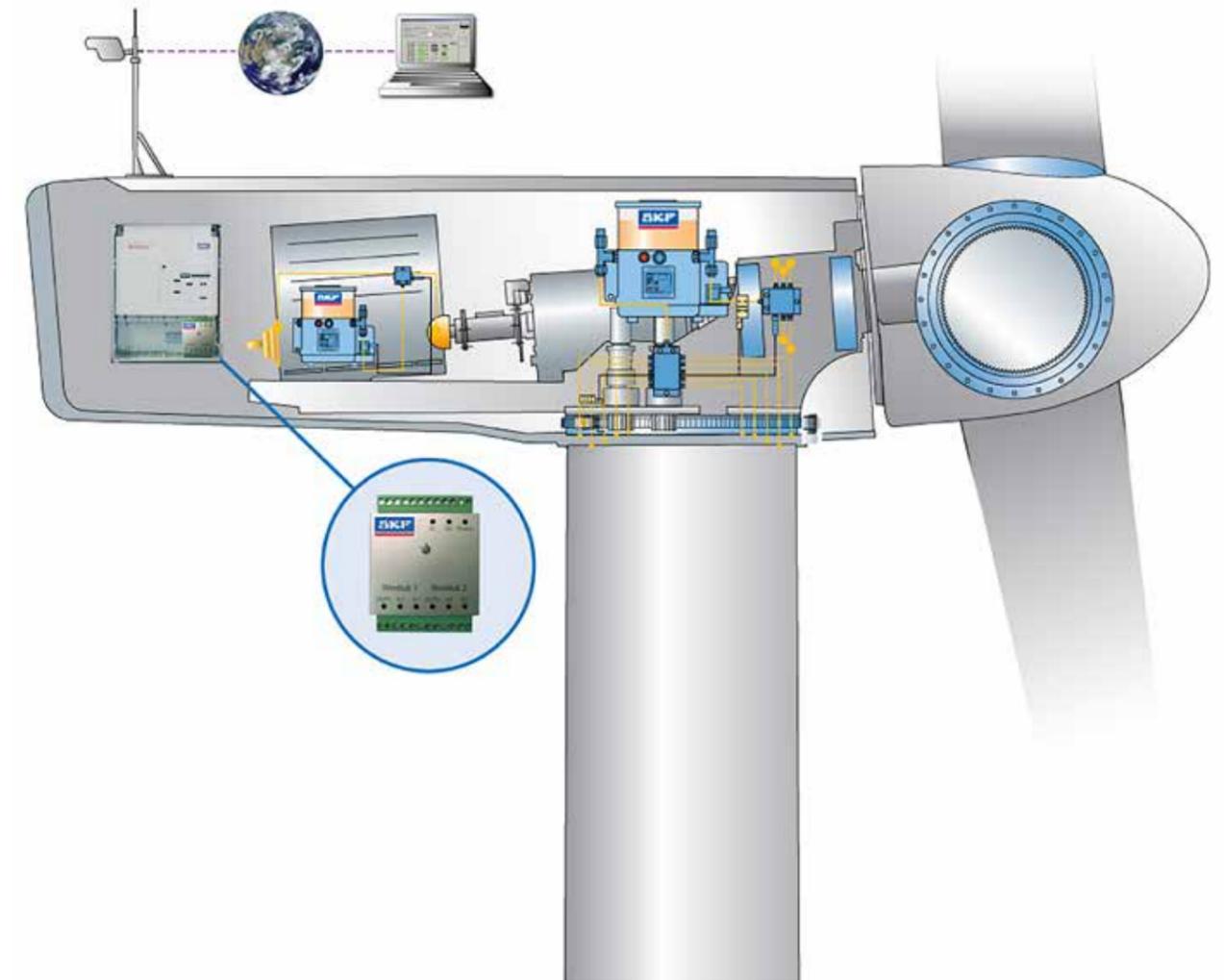
Lubricants are applied in pre-determined volumes and time intervals by each valve, or may be progressively applied to all lubrication points while the main pump is running. Only occasional manual intervention is needed to recharge lubricant reservoirs and simple system maintenance as part of a normal routine.

When interfaced with a remotely accessible condition monitoring system, which uses vibration and temperature sensors mounted on a turbine's main shaft bearings, drive train gearbox and generator to collect, analyse and compile a range of operating data in real-time, condition-based lubrication enables automatic applications of lubricant as and when they are necessary - and independently of any existing time-based cycle. A remotely located condition monitoring specialist can use the vibration/temperature data analyses to set appropriate alarm settings that trigger additional or less frequent lubrication cycles and volumes, as necessary.

## SEPARATE INDEPENDENT LUBRICATION SYSTEMS

A large wind turbine will typically have up to five lubrication systems, covering pitch bearings and gears, yaw bearings and gears, main bearings, gearboxes and generators. Each of these systems will be subject to different stresses and will therefore have different lubrication requirements; for example, main bearings are subject to fluctuating thrust loads, and generator bearings to high and low speed axial loads. Additionally, the turbine has to withstand demanding environmental conditions, with extremes of temperature, high and gusting winds and, in coastal locations, the effects of salt corrosion.

Pitch bearings require a constant re-supply of lubricant. The lubrication unit is mounted in the rotor, with which it continually turns, adjusting to the resulting vibration and centrifugal force. Grease pumps, such as those supplied by SKF are fitted with a grease follower plate to ensure that grease is maintained in the area of the pump elements, enabling suction even with rotation. From there, the grease arrives at the metering



devices through a progressive or single-line lubrication system.

Lubrication for the pitch open gear can also be supplied via SKF pumps for the rotary application. Lubrication pinions are used to apply grease precisely to the area of contact on the drive pinion or the pitch open gear, and evenly lubricate the entire cog width.

An electrical grease pump introduces lubricant into the yaw bearing via progressive or single-line metering devices. Automatic lubrication achieves a sufficiently thick lubricant film to prevent excessive wear and the 'stick-slip' effect upon turning the nacelle. The automatic lubrication pinion meshes precisely with the gearing, distributing the lubricant uniformly in the area of contact across the entire cog width. Used grease is removed by a lubricant collector and delivered to a reservoir to prevent spillage on the nacelle floor, improving worker safety.

The main bearings of a wind turbine are subject to severe forces and usually require large quantities of lubricant. For stationary operation, a stirring and fixed paddle in the pump's reservoir

is sufficient. The automatic lubrication system continually supplies grease to the main bearings even while in motion.

The gearbox is lubricated and cooled by oil, which is recycled via filters. The oil can be electrically heated to achieve an optimal start-up temperature for the lubrication cycle in conditions of low ambient temperatures. Flow limiters maintain the prescribed oil volume flow independent of pressure and temperature changes and these can provide feedback on the current flow rates to the condition monitoring system.

## CONTROL AND MONITORING

Taking SKF's condition-based lubrication concept as an example, here we have the interface between a condition monitoring system (SKF WindCon, in this case) and the automated lubrication systems (SKF Windlub or Lincoln Quicklub, for example). Combined, these elements are able to track and control lubrication system health, pump status and grease levels, as well as alerting operators to failures such as empty or blocked

lubricant pumps or fractured feed lines. This monitoring data can also be uploaded via internet connections to remotely located diagnostics centres, operating globally 24/7, for expert analysis and reporting.

By logging and tracking deteriorating component conditions in real-time, condition-based monitoring allows maintenance decisions to be based on actual machine conditions, rather than arbitrary maintenance schedules. Along with the possibility that maintenance intervals can be extended, the system provides a powerful tool for managing day-to-day maintenance routines and consolidating high risk, costly maintenance activities.

SKF





# COLD COMPLICATIONS

The task of lubricating the turbine is particularly challenging in extremely low temperatures.

As temperature decreases, the grease's resistance to flow increases, affecting central grease systems in two ways...

1. Reduced 'pumpability' – more pressure is required to deliver the grease to the lubrication points, which means that system capabilities can be exceeded
2. Reduced 'slumpability' – less grease flows into the suction side of the pump, so that the grease flow in the system can be disrupted

Take the pitch bearing for example. Located in the nose at the front of the turbine, the pitch is fully exposed to the elements all year round. In extremely cold conditions, NLGI 1.5, 460 viscosity greases have been found to thicken while travelling to the pitch bearing, resulting in excessive power being required to help the grease reach the bearing.

It is therefore essential that the selected lubricant has flow characteristics that guarantee an adequate grease supply to all lubrication points. Qualifying a grease at

-50°C requires the pressure not to exceed 1600mbar in a defined test rig. Any higher and the pressure can mean the grease is not delivered at the defined temperature.

Further complications can be experienced in the grease reservoir. Here, the grease travels into the central lube system via a pump. The pump is below the reservoir, allowing gravity to help push the grease into the pump. However, an NLGI 1.5, 460 viscosity grease may stick to the sides and be too thick to reach the pump in extreme cold environments. As a result, the pump will fail to deliver grease, leaving parts of the bearing unprotected.

## NEW GENERATION WIND TURBINE GREASE

ExxonMobil's Mobil SHC™ Grease 102 WT is an example of a lubricant scientifically engineered to operate effectively in extreme cold temperatures. The unique features of its synthetic base fluids are combined with a high quality lithium complex thickener to ensure it provides excellent bearing protection and

structural stability from -50°C to 120°C. In fact, even at -50°C, Mobil SHC Grease 102 WT offers excellent mobility and pumpability at 600mbar, helping ensure optimum lubrication while also protecting against pressure-related issues.

### PROTECTION FROM WITHIN

As wind turbines are installed in ever-more challenging environments, windfarm operators must optimise every element of their operation to help protect their machinery. The right lubricant, such as Mobil SHC Grease 102 WT, can help extend equipment life, reduce maintenance costs and increase uptime – protecting their business from within.

### Mobil Lubricants



**pl Peter lonsdorfer** *... simply better* **Wind-Energy® Oil Service Unit**

## Gear and hydraulic oil changes on wind turbines onshore and offshore across Europe and beyond.

**onshore**  
**offshore**

Please contact us:  
 UK 0044 1560485854 | [inbox@lonsdorfer.co.uk](mailto:inbox@lonsdorfer.co.uk) | [www.lonsdorfer.co.uk](http://www.lonsdorfer.co.uk)  
 DE 0049 4841 991-0 | [info@lonsdorfer.de](mailto:info@lonsdorfer.de) | [www.lonsdorfer.de](http://www.lonsdorfer.de)

## Closer to you.

Conditions in the wind and wave energy industry can be tough: extreme temperatures and high mechanical loads.

Our readily biodegradable speciality lubricants are the clean choice for clean energy and are so eco-friendly that they are used widely in one of the world's most sensitive eco-systems – the Arctic.

Whether it's extreme loads, sophisticated materials, or optimum performance – our speciality lubricants deliver increased performance of turbines on land, or out at sea.

Our experts will go to great lengths to ensure your turbines run trouble-free, so if it's about pushing the limit of what is possible then Klüber Lubrication solutions are in demand.

[info@uk.klueber.com](mailto:info@uk.klueber.com)  
[www.klueber.com/wind-power-industry](http://www.klueber.com/wind-power-industry)

your global specialist



# SMOOTH OPERATION AT ALL TEMPERATURES

In the offshore wind energy sector components have to withstand harsh conditions and work effectively, which is why choosing the right lubricants is crucial to ensure appropriate levels of reliability are maintained.

Speciality lubricants from Klüber Lubrication help to maximise the output of equipment and critical assets whether floating or fixed with minimum maintenance intervention to reduce downtime and save costs.

The company is a trusted partner of OEM's worldwide with a portfolio of over 2,500 speciality lubricants designed to perform in the harshest offshore operating conditions and has for over 85 years continually provided greater product durability, solving the most challenging lubrication problems of modern-day equipment

## COST EFFECTIVE LUBRICATION – A SMALL INVESTMENT THAT CAN MAKE A BIG DIFFERENCE

As wind generators get ever larger, the power density in wind turbine gears increases causing higher stress on the gears. Experience has shown that conventional gear oils often fail to meet the taxing requirements in terms of wear protection for rolling bearings, micro-pitting resistance, foam and residue formation and viscosity stability.

In-house tests have shown that Klüber Lubrication advanced additive technologies can react at the surface of the tooth flank even at low oil temperatures to assure protection across the widest range of operating conditions as well as assuring the most durable service life and transmission efficiency.

## SYNTHETIC GEAR OILS

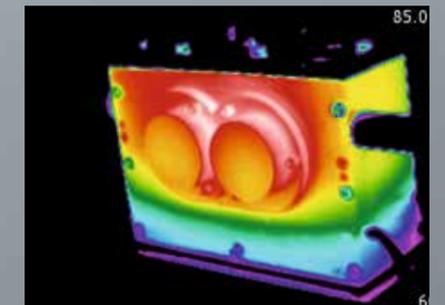
Synthetic gear oils for example offer a significantly higher efficiency than standard gear oil based on mineral oil, resulting in a lower friction which reduces temperature, lowers energy costs and enables extended oil change intervals – an important consideration when lubricating offshore wind turbines.

## PUSHING THE LIMITS – THE FUTURE OF SPECIALITY LUBRICANTS

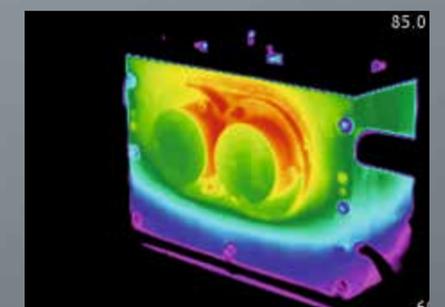
As an independent supplier of speciality lubricants the company excel at driving improvement measures even when 'problems' don't exist to deliver on overall uptime and productivity aims.

Through their technology, expertise and by working in close collaboration with leading OEMs, Klüber Lubrication continue to push the limits of efficiency and performance helping to achieve the best operational practices that combine economic savings with environmental benefits.

## Klüber Lubrication



Standard gear oil (mineral oil, ISO VG 220)



Klübersynth GEM 4-220 N (synthetic oil, ISO VG 220)

# WIND TURBINE MAIN BEARINGS

## A CHANGE IN THINKING PLEASE

Wind turbine main bearings are a critical part of the turbine's drivetrain. Main bearing health and longevity is key to production and impacts on the condition of other major drivetrain components like the gearbox. It would therefore seem logical that main bearing design should facilitate routine maintenance up-tower to optimise their operational condition. Main bearing grease flushing (MBGF) is available for certain wind turbines, however it is not universal and MBGF is used by many as an operation of last resort, or is not considered at all.

Detecting main bearing failures with condition monitoring in the early stages of the failure process is relatively straightforward. As main bearing failure can be a lengthy process, many will monitor the situation, however corrective or preventative action is rarely undertaken. Current thinking seems to be: *"There is a failure. Track the failure. Exchange when condition is so bad catastrophic failure and consequential damage is imminent."* Many think there is no real choice and consequential damage in areas like the gearbox planetary stage is not considered at all.

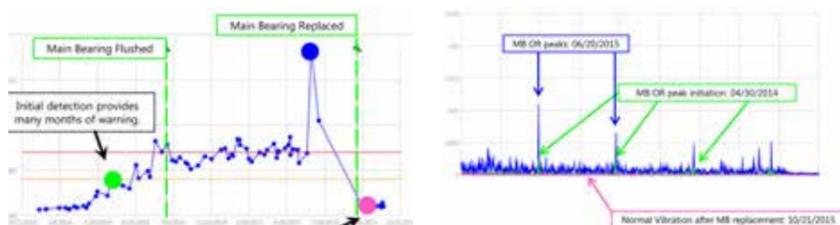
### ONSHORE & OFFSHORE WIND TURBINES

When dealing with onshore turbines, crane availability is good and weather windows are frequent. Owners have plenty of time to organise parts and labour. When considering offshore turbines, things become more involved. Availability and cost of suitable jack-up vessels required for major component exchange are at a premium and weather windows fewer. The financial implications of de-rating turbines for extended periods, or shutting down completely to prevent catastrophic failure and consequential damage, are huge.

Where MBGF is available it can clearly be shown that main bearing life extension occurs. Also, the earlier in the failure process that flushing is performed, the



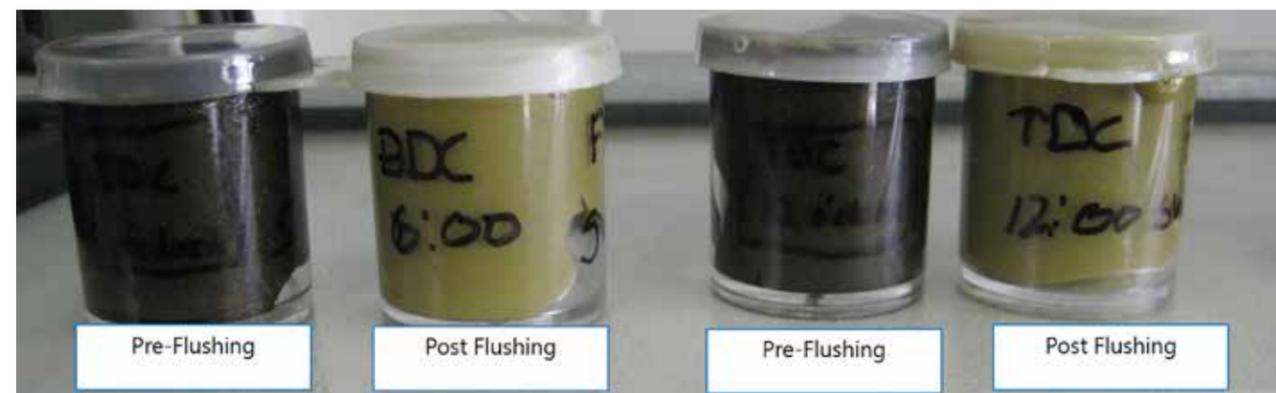
Romax Fleet Monitor Vibration Monitoring showing main bearing failure early detection and flushing to prolong bearing life until convenient repair scheduling for a reduced cost of failure



longer the life extension is seen to be. It is almost universally true, however, that MBGF is regarded as an operation of last resort used to nurse bearings through to the next available weather window or the next round of Opex budget allocation.

This is strange when compared to how manufacture, up-tower serviceability and O&M strategies of major components have improved over recent years. New turbines come fitted with CMS for the drivetrain. Off-line filtration, particle counters and quality sensors come as

standard and oil is changed as a matter of course when necessary. Gearbox up-tower serviceability, service tooling and service procedures are considered at the design stage. Sump and splash lubrication has been replaced by forced and adaptive lubrication. Keeping components in the nacelle by extending their useful life is one of the best ways to reduce Opex and lower the cost of energy. So what's happening with the main bearings?



The grease in your main bearing before and after flushing. Which would you prefer in your critical machinery?

### SINGLE AND DOUBLE MAIN BEARING CONFIGURATIONS

Several different main bearing configurations exist. For the purpose of this article let's discuss the single and double main bearing configurations most commonly used. In these bearings we will normally find two sets of spherical roller bearings running in two opposing bearing races. The upwind race nearer the rotor, the downwind race nearer the gearbox.

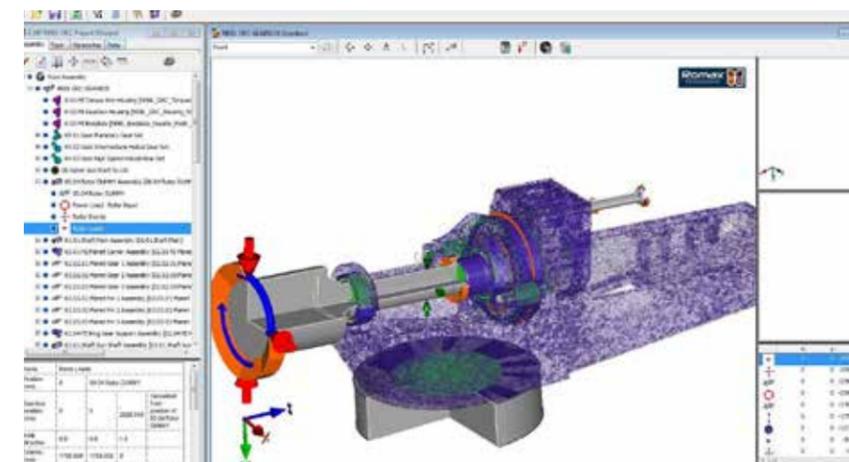
The bearings are grease lubricated, an auto-greaser being the preferred method of delivery. The auto-greaser pumps new grease into the bearing at a pre-determined rate, new grease forces old grease through the bearing to an exit point and waste collection. In theory the bearing always runs on fresh, clean grease.

### REALITY

The reality, however, is that the new grease takes the path of least resistance through the bearing from ingress to exit, old dirty grease populates areas of the bearing not reached by the new. Over time old grease becomes heavily contaminated and compacted. The effectiveness of the lubrication is now compromised and the condition for boundary lubrication - metal to metal contact - occurs. Micro-pitting, macro-pitting and spalling are inevitable. The inexorable progress towards main bearing critical failure has begun and for many turbines there is nothing to be done to prevent it or manage it as no MBGF solution has been available.

### CONSIDERATIONS

1. Would turbine owners accept a gearbox where there was no option to change the oil?
2. Would turbine owners accept gearbox exchange as the only option to contaminated oil?



Romax Gear and Bearing Engineering Model Showing the 3 Point Mount Drivetrain Configuration. The double spherical roller main bearing is directly behind the hub (hub mass is represented by the grey cylinder)

The answers are quite obviously no, so why is it that so many turbines are being manufactured with no option for main bearing grease flushing and the only maintenance option is replacement on the inevitable failure?

### IS MAIN BEARING FAILURE REALLY A PROBLEM? SOME FACTS.

Over 12 months, 577 on & offshore Multi-MW turbines were monitored. The confirmed failures detected were as follows...

Main bearing	16
Gearbox Planetary Bearings	7
Gearbox Intermediate Shaft	6
Blade	2
Total Failures	31

### FAILURES

Of failures detected, 51% were main bearing related. Annually, the main bearing failure rate was 2.77% on windfarms only 20-25% into their expected life.

The problem exists and occurs relatively early in the turbine's life. With expected life now 25-30 years, it's time to change thinking on main bearings.

Surely it's better to design a main bearing that could be easily flushed, cleaned and repacked with fresh grease up-tower?

### PREVENTATIVE MAINTENANCE

Where possible, surely it's better implementing main bearing grease flushing as preventative maintenance rather than an operation of last resort?



**Dave Moss**  
Commercial Manager  
**Romax Technology**



# £50,000 GRANTS FROM £6M OFFSHORE RENEWABLES GRANT FUND

The first companies have been awarded grants of up to £50,000 from a new £6m fund for making a difference in the cost-cutting drive in offshore renewables. Applications to the SCORE fund have been received from across England, with each company bidding for a share of the money to help develop their ideas, technologies and systems, designed to bring down the costs of offshore renewables.

It is hoped this SCORE (Supply Chain Innovation for Offshore Renewable Energy) fund with more than 200 jobs will be created, on top of the 111 by an earlier SCORE fund of £2.5m two years ago.

## RECIPIENTS

The grant panel, meeting at the iconic offshore renewables hub OrbisEnergy overlooking the North Sea at Lowestoft, has so far made three awards of the largest grant of £50,000.

The first recipient – described as one of the most exciting and promising cost-saving projects in offshore wind – said its grant offered it more than a much-needed cash injection for research and development. It also sent an important message to private investors that a project was worth backing.



Greenspur's Andrew Hine, Hugh-Peter Kelly

## GREENSPUR RENEWABLES

Andrew Hine of GreenSpur Renewables, awarded the first grant of £50,000 for its low cost direct drive permanent magnet generator using ferrites commented: "Achieving a SCORE award is seen as a form of technical validation. The business angel community is fully aware of OrbisEnergy and its technical competence. Being able to announce our first grant award in early 2014 enabled us to close our first round of seed funding very shortly after."

The grant application was simple and quick, with a guarantee that suitable applications would be presented to a grant panel for decision within 10 days.

## BUSINESS & TECHNICAL SUPPORT

SCORE project manager Robert Bush commented: "Successful applicants will also receive business support from enterprise specialists Nwes to help

develop and grow their businesses and energy industry experts at Nautilus Associates, as well as technical support from Offshore Renewable Energy Catapult (ORE Catapult,) leading renewable technology experts with world-class testing laboratories and facilities.

Companies have access to extensive business support from Nwes and one of its delivery partners, Nautilus, if more relevant to the company."

## MUCH MORE THAN A GRANT

"SCORE is about so much more than the grant. The expertise and technical support from ORE Catapult can be invaluable as well as Nwes business support."

## MOVING ON FROM OIL & GAS

Businesses that have served the 50-year-old oil & gas industry are invited to consider converting that expertise to the offshore renewables sector.

Rob continued "The East of England needs another industry to pin its colours to. We have the skills, we have the workforce and oil & gas can easily turn its hand to offshore wind.

"The oil & gas supply chain has a long and proven history of providing quality items for the offshore energy industry to a high standard with pressure to reduce costs.

"Companies have the knowledge and experience to diversify and move into offshore renewables at a time when the industry has been badly affected for two years and is continuing.

"SCORE is a fantastic opportunity for these companies and for the East to become firmly ensconced in offshore renewables and build a lasting legacy for companies across the supply chain."

## COUNTRYWIDE PROGRAMME

This SCORE programme has been rolled out to companies across England rather than just the East of England.



"THIS SCORE PROGRAMME HAS BEEN ROLLED OUT TO COMPANIES ACROSS ENGLAND RATHER THAN JUST THE EAST OF ENGLAND."

Greenspur generator



Rob Bush, Project Manager for the SCORE grant fund.

Rob explained further: "I'd say to any company with an idea or an existing system being developed for and within offshore renewables to get in touch. This isn't just about technologies and products – it's about processes, systems, patenting a product to exploring concepts that offer new ways of solving problems – anything driving efficiency in offshore renewables."

Grants are available for up to 40% of eligible costs or £50,000, whichever is the lower, with a minimum grant of £2,500.

Rob heads up the SCORE team, which includes Ian Bird, Business Advisor, and Matt Holden, Contractual Manager, all based at OrbisEnergy, Lowestoft, with two more in Cambridge and Essex, Chris George and Pauline Prockter.

## EXCITING PROJECT

Rob concluded: "It is exciting and not only can we market the excellent services it provides but we can get businesses from outside East Anglia together with those inside East Anglia. It is about gaining momentum and about stamping Lowestoft and East Anglia as a proper hub for offshore renewables."

SCORE is part-funded by the European Regional Development Fund (ERDF) and is open to small and medium-sized companies with an annual turnover of less than 50 million euros.

## SCORE





# TORQUEING WITH TRACEABILITY

**Torqueing, in this context, is essentially the measured application of rotational force to a threaded fastener.**

When the torque is either under or over the manufacturer's specification, it can cause considerable damage to the turbine structure. Guarding against this risk must be a priority in order to safeguard the health and safety of operatives, and the life expectancy of the turbine.

## UNDERLYING COSTS AND FAILURES

The extent of the damage has the potential to vary considerably. One key technical implication of over or under torque however, is the potential for vibrations in the turbine... which presents a real risk of catastrophic failure.

## TOOLS REQUIREMENT – A PROBLEM

In many windfarms maintenance operatives have to use a variety of tools to complete the job. For example, in the turbine tower; an operative may need one tool to run down the bolts plus a hydraulic wrench to achieve final torque. Using these two tools could present a number of complications, particularly regarding ease of operation and manoeuvrability. Subsequently health and safety is a significant concern. Thus being able to record the torque data from tightened joints for audit purposes would be a distinct benefit.

Furthermore, when triggering electric multipliers on pre-tightened bolts, a dangerous over-torque can occur due to the slow response time of controllers, high motor start currents and high motor inertias. In some instances, this over-torque can be in the region of 100 percent. When triggered multiple times in this type of condition, there is an extreme danger that the application may fail due to the overstress of the joint.

## SOLUTION

So, a tool that will tighten bolts accurately to the required torque, audit pre-tightened bolts, and can then record this data is required.

A single tool solution does exist. Norbar's EvoTorque2, enables users to torque bolts accurately and reliably and generate a record to confirm the fact, providing complete traceability for Operations & Maintenance teams and their clients.



**“ GUARDING AGAINST THIS RISK MUST BE A PRIORITY IN ORDER TO SAFEGUARD THE HEALTH AND SAFETY OF OPERATIVES... ”**

In response to customer feedback from many industries Norbar has designed and launched EvoTorque2 a product which adds data memory and transfer capabilities, and audit mode to the features and benefits of the original EvoTorque tool.

EvoTorque2 is capable of incredible control in tough conditions – where bolts have not previously been tightened it will deliver torque values with an accuracy of ±3 percent. Where torque is re-applied to a pre-tightened bolt results are within ±5 percent of set torque.

When performing a retightening test, the EvoTorque2 also demonstrated a clear advantage whereby, when triggered 18 consecutive times on an already tightened bolt, it achieved total accumulated over-torque of around 15-20 percent of the set torque; depending on the hardness of the joint.

So many consecutive applications using traditional electric tools would almost certainly result in failure of either the tool or bolt. EvoTorque2 can provide more reliable torque results than conventional tools and negates the need for final torqueing with a hydraulic wrench.

The output of most electric motors reduces as the motor temperature increases with use, resulting in less accurate torque values. EvoTorque2 accuracy will not change as a result of ambient temperature or motor temperature, thus enabling numerous joints to be tightened successively with trusted results assured.

Power on windfarm sites is usually provided by small generators with long cable runs, this raises concerns about the quality of the power supply. The implication is that most electric tools either will not run or their torque output becomes erratic. EvoTorque2 tools are largely immune from the effects of voltage fluctuation due to its motor controller technology; the tool will either run accurately or indicate that the voltage is outside of tolerance.

## NEW TRACEABILITY AND CONTROL BENEFITS

Every torque and angle value that EvoTorque2 applies can be recorded with a corresponding date and time stamp. Up to 3,000 such readings can be stored in the tool's memory. These can be downloaded to a PC either by USB cable or transferred wirelessly via Bluetooth Smart for later analysis.

Modes of operation include Torque, Torque & Angle, and Audit. The first two enable users to select torque only or a combined torque & angle target



respectively. The new Audit mode facilitates the checking of pre-tightened bolts, and thereby ascertaining if the bolt was previously under-torqued, and what change has occurred, before retightening the joint as required.

Up to 12 user IDs can be downloaded to EvoTorque2 and results stored against individual users, a helpful control where tools are shared across multiple users, e.g. different shifts. Work IDs, that is specific targets (torque, or torque & angle) can be set up e.g. for a specific nacelle or base bolt. Up to 20 work IDs can be put in a work group and up to 5 work groups can be set up too. This enables audits of not just the bolts of a single tower to be easily conducted but of all the towers in a windfarm, and even the bolts across multiple farms.

## INDEPENDENT TESTS

Furthermore, in independent tests and calibrations conducted across a number of Spanish windfarm sites; EvoTorque2 achieved the OK/PAA/APPROVAL standard; making them the only electric multipliers permitted for use to perform final torque on a number of windfarm sites.

EvoTorque2 also features a third party verified sound pressure which does not exceed 70 dB (A) and a vibration level of 0.304 m/s<sup>2</sup> which significantly reduces any possibility of medical or health and safety related issues such as hearing loss or White Finger, during use.

## EVOTORQUE RANGE

Both products are available in 110V and 230V versions and crucially are weather sealed to IP44. The ranges cover requirements from 100 N·m to 6,000 N·m although the 2,000 N·m tool caters for most windfarm applications. The products can be serviced and calibrated locally through a growing network of international Norbar distributors who have a great deal of wind industry experience.

### Norbar





Gee-Force team

## EXPANDED STOCK OF TORQUE TOOLS

**A growing offshore supply company that saw a record growth in turnover in the most difficult year in the oil & gas industry has expanded its range and work scopes.**

Gee-Force Hydraulics, best known for its hire and sales of their hydraulic bolting torque wrench in the offshore sector, has expanded its spread of tools including pneumatic and electronic tools, including the Norbar range, to push into new markets.

### LARGER PREMISES

Since moving to its bigger Great Yarmouth base earlier this year, it has extended its rental range of essential equipment and locating it on-the-spot in Great Yarmouth.

The offshore wind market on its doorstep off the east coast – the UK’s biggest centre for the development of offshore wind – is a target for some of its new tools, including Norbar’s electronic wrench, the Evo-Torque.

*“The Evo-Torque2 is connected to Bluetooth and leaves an audit trail, which is appealing to the offshore wind industry,”* Gee-Force Hydraulics Managing Director Graeme Cook said.

### PNEUMATIC, ELECTRONIC AND ELECTRONIC

Gee-Force’s expanded stock of torque tools is hoped to lead it into more new sectors, Graeme commented: *“Not all of the new sectors are not going to be our core hydraulic bolting equipment. Our Norbar range has pneumatic and electronic. Electronic wrenches have become far more sophisticated and sought after and are easier in tight spaces, involving less kit, and would be desirable for offshore wind sector.”*

As well as its busy offshore work, it plans to push its services throughout the East of England to the south East and London from its Beacon Park base.

### TARGET MARKETS

New target markets for the company include tower cranes in the construction sector, especially into the capital where new building is buoyant, and production lines.

It has recently supplied tools for its first project on the London Underground system, which it hopes will develop into a promising new market, and to a demolition company bringing down a disused power station.

### HIRE SERVICES

Offshore work has been busy because operators and large contractors working on North Sea gas platform maintenance projects are avoiding expensive expenditure on equipment and increasingly looking to hire tools.

Graeme explained *“Big operators still need to complete maintenance jobs offshore so they hire in the equipment to avoid capex (capital expenditure) on its own equipment, hence our decision to relocate to this larger facility to continue to support the very current market needs.”*

### INCREASED DEMAND

Demand has also grown for tools to be readily accessible in Great Yarmouth to save offshore companies time and money mobilising equipment for offshore projects from Aberdeen.

*“Expanding our range in Great Yarmouth is in response to our customers’ needs and our target markets. “Feedback from clients is the big difference it makes to their bottom line on projects if they can access tools on-the-spot in Great Yarmouth. Previously, some customers had a 36-hour delivery time.”*

### IMPROVED DELIVERY TIME

*“We can get it to them in a couple of hours from our Beacon Park base, as opposed to mobilising from further afield, Aberdeen even, which some of our clients would have to do.”*

*“We had a call from a customer carrying out work at Bacton Gas Terminal recently because equipment was needed urgently at 3.30pm and it was on site by 5pm. This is the huge difference of being based in Great Yarmouth.”* Graeme concluded.

### Gee-Force



## MOVING FORWARD INTO 2017

**South Yorkshire based bolting solutions company, Torque Solutions Ltd, are excited about their expansion into bigger, brighter premises in 2017. The New Year promises great things for the Yorkshire based business, which has been operating for 14 years.**

### SPECIALISED SERVICES AND SUPPORT

The company provides bolting solutions and support to customers in wide and varied sectors such as wind energy, quarrying, power generation, oil and gas, and general heavy industry.

They are the UK distributors for the Titan by Chicago Pneumatic range of high quality hydraulic bolting tools and associated equipment. Whilst offering this equipment for purchase the company also operate a rental service. In addition to the sale and rental of equipment Torque Solutions have an accredited in house calibration facility for the calibration of all types of torque tools, bolt tensioners and pressure gauges. They have been the calibration house for one of the world’s leading wind turbine manufacturers since 2008.

### TIME FOR CHANGE

With their business steadily growing over the years the company has outgrown its current office and workshop space. Ruth Allsopp, Director of Torque Solutions commented: *“We’ve grown significantly in recent years and as we continue to*

*expand our team and our offerings, we realised that we needed to look for bigger premises. When the opportunity arose to purchase land adjacent to our current offices we jumped at it and decided to build a new fit-for-purpose facility.”*

### A FRIENDLY WELCOME

The Torque Solutions team look forward to welcoming suppliers and customers to an open day early in the New Year. When you visit their premises you can see they are a close knit, family run operation. The two directors Ruth and Peter Allsopp are a married couple in addition to business partners and they, along with their dedicated staff, have always taken great pride in ensuring their customers are met with the highest level of service and support.

### Torque Solutions



# NEW TENSION NUT ELIMINATES NEED FOR SPECIALIST TOOLING

Heico Fasteners, manufacturers of the Heico-lock anti-vibration wedge lock washers, launched their new Heico-tec tension nut at the Engineering Design Show (EDS) that promises to eliminate the need for specialist tooling for large bolted joints.

## UNIQUE PRODUCT

The Heico-tec tension nut is unique in the fact that the pre-tension force of the large main thread is distributed to many smaller pressure bolts. Because these pressure bolts are smaller a conventional torque wrench is all that is needed to achieve the correct pretension force, eliminating the need for complex, bulky or heavy tools and makes securing large bolted joints more convenient and easy.

## AVOIDING TIME CONSUMING AND POTENTIALLY EXPENSIVE OPTIONS

Working with large bolted joints usually means an engineer having to arrange specialist electric, hydraulic or pneumatic bolt tensioning services. Heico-tec does away with these time consuming and potentially expensive options and indeed is so fast that Heico-tec nuts are often tightened in the same time it takes to set up such tooling.

In short ensuring that bolted joints are secure and safe is of the utmost importance and the company's new product ensures joint integrity for use with larger bolts without the need for specialist tools, bringing technical and cost benefits.

Heico Fasteners



## Supplying Bolting Solutions to the Renewable Energy Sector

- 🔧 HIRE
- 🔧 REPAIRS
- 🔧 CALIBRATION
- 🔧 SALES



T +44 (0) 1909 550767 E sales@torque-solutions.co.uk  
M +44 (0) 7860 373425 W www.torque-solutions.co.uk

# EVOTORQUE<sup>®</sup> 2

AN EVOLUTION FOR TORQUE CONTROL



- USB and Bluetooth<sup>®</sup> 4.0 data transfer
- New Audit Torque mode enables users to check pre-tightened bolts
- Delivers accurate torque regardless of fluctuating voltage
- IP44 protected
- Approved for application of final torque
- 3,000 reading memory, time and date stamped
- Complimentary PC software 'EvoLog' for data management and tool configuration



+44 (0) 1295 753600 | enquiry@norbar.com | www.norbar.com

# PROVIDING LEADING SOLUTIONS TO OFFSHORE WIND FARMS

**Introducing Anthony Jones from MTE...** *“MTE recognised the importance of renewable energy, and as such, transferred our experience, capabilities and knowledge to enter into the offshore renewable sector to provide our leading solutions to offshore windfarms.”*

When it comes to protecting people and equipment from blast, fire and radiant heat hazards, UK headquartered Mech-Tool Engineering Ltd (MTE) has over 46 years' experience in doing so.

## GLOBAL LEADER

Recognised as a global leader in delivering turnkey fire and blast protection and modular solutions to the oil and gas and nuclear markets, the company has most recently made a mark for itself over in the renewable energy sector having supplied its leading solutions to some major ground-breaking projects including Galloper 2 and Dudgeon.

Having been impressed by MTE's design and engineering capabilities, Wind Energy Network took the opportunity to interview the company's Business Development Director, Anthony Jones, who has been at MTE for over 18 months heading up the fire and blast solutions division, to find out more about the company's entry into wind energy and its plans for the future.

## HOW DID MTE GET INTO THE FIRE AND BLAST PROTECTION INDUSTRY? WAS IT ALWAYS THE FOCUS?

The initial beginnings of the offshore sector in the North-East back in the early 80's was key to MTE focusing its attention in line with the UK shipyards and diversification away from sole reliance on ship building.

## HAVE YOU SEEN A CHANGE IN THE TYPE OF PROJECTS YOU'RE WORKING ON NOW VERSUS 10 OR 20 YEARS AGO?

Yes, particularly due to the movement of fixed platforms to floating platforms which has since seen further field developments in terms of the advances in subsea technology. MTE recognised



the importance of renewable energy, and as such, transferred our experience, capabilities and knowledge to enter into the offshore renewable sector to provide our leading solutions to offshore windfarms.

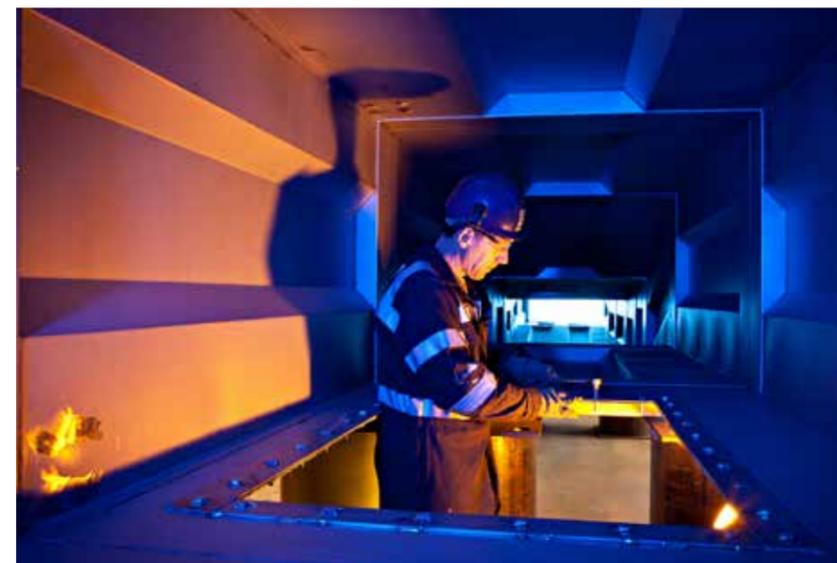
## HAVE YOU HAD TO MAKE CHANGES TO THE WAY YOU OPERATE AS A COMPANY BASED ON INDUSTRY MOVEMENTS, OR HAS MTE BEEN A STEADFAST BUSINESS?

We are always looking at continuous improvements and embrace changes that are required to meet the ever-changing demands and challenges of projects and clients globally. MTE does not stand still and invests annually into R&D activities to continually develop and fine tune our products based on new technologies and the progression in materials. MTE ensures key training programmes are provided to new and existing members of the MTE family to understand the benefits of new technologies and benefits of passing this onto our clients.

“RECOGNISED AS A GLOBAL LEADER IN DELIVERING TURNKEY FIRE AND BLAST PROTECTION AND MODULAR SOLUTIONS...”

## MTE HAS GAINED VERY VALUABLE CONTRACTS IN RECENT TIMES WITH SOME VERY HIGH PROFILE CLIENTS, HOW DOES WORK COME TO YOU?

Great effort and persistence by the MTE BD and sales team is required to identify, develop and chase project opportunities in a global arena. Couple this with over 46 years' experience in providing optimised design and engineering solutions from MTE's in-house team with the ability to manufacture high quality world class products – cost effective, competitively priced solutions – all giving an excellent offering and deliverable to projects and clients.



## WHAT HAS BEEN THE MOST REWARDING CONTRACT YOU'VE EVER GAINED?

For me, one of our biggest successes in the last 12 months for MTE includes securing the five year framework agreement from STATOIL for the Johan Sverdrup Field Development. MTE will be designing, engineering, supplying and manufacturing Fire and Blast Walls, Heat Shields and Wind Walls and working with one of its Norwegian door partners to supply windows.

## GIVE AN EXAMPLE OF A TIME WHERE MTE WAS ABLE TO OVERCOME A PARTICULARLY DIFFICULT PROBLEM THROUGH AN INNOVATIVE SOLUTION FOR A CLIENT

BP Miller – 1989 – Following the Piper Alpha Disaster – MTE designed and engineered a completely new Blast Relief system to reduce the risks from explosion for future North Sea projects. MTE has continued to develop its products and ensure its fully certified fire and blast safety solutions are at the fore front of industry safety requirements globally.

## WHAT WOULD YOU SAY IS MTE'S GREATEST STRENGTH?

With no doubt – our people throughout the business. MTE has many years of highly developed skills and experience from early design, engineering right through to some of the most highly skilled tradesman manufacturing, delivering and supervising safety solutions protecting people and equipment from fire, blast and radiant heat hazards working to stringent quality and safety standards.

## YOU RECENTLY GAINED A NEW MD IN THE FORM OF DAVID SCOTT, HOW HAS HIS DIRECTION INFLUENCED MECH-TOOL ENGINEERING SINCE HE WAS APPOINTED?

It is early days – but David brings a wealth of experience and knowledge to MTE in challenging market conditions. We are looking forward to executing the vision that David and the MTE board of directors have for the coming years, building on an excellent foundation and success of the last 46 years, supported by an excellent global team at MTE.

## WITH THE EVOLUTION OF TECHNOLOGY COMES MORE FOCUS ON HEALTH AND SAFETY, HAS BUSINESS BEEN AFFECTED AT ALL BY THE RISE OF SAFER MORE INNOVATIVE SYSTEMS?

MTE operates and provides solutions for some of the most challenging and demanding project Health and safety industries and environments – MTE is a safety solution provider – safety and quality is paramount to MTE and its success. We have always embraced a high level of SHEQ awareness throughout its business and supply chain. This is demonstrated by MTE achieving the President's award for safety and the Gold Award status from ROSPA for the last 16 years in succession.

## HOW IMPORTANT IS WEIGHT AND COST SAVINGS IN HIGH HAZARD INDUSTRIES?

Extremely important as weight equates to cost for many offshore applications – not only in terms of material weight savings but also the impact on material handling and transportation

## WITH THE RISE OF OFFSHORE RENEWABLES COMES THE NEED FOR RISKIER DEVELOPMENTS IN HARSHER ENVIRONMENTS, HOW IS MTE MEETING THESE CHALLENGES?

MTE has operated for decades in the offshore oil and gas sector and fully appreciates the need for risk identification and mitigation in harsh environments – MTE has provided fire and blast solutions to offshore deepwater platform and floating projects located in some of the world's most challenging and harsh environments.

Offshore renewable projects are advancing into deeper more challenging environments and MTE has the experience and pedigree to provide the most optimised solutions.

## MTE HAS AN IMPRESSIVE PORTFOLIO, HOW DOES YOUR PAST EXPERIENCE PREPARE YOU FOR NEW CHALLENGES?

With continuous business improvement and investment in people and processes, MTE has seen many sectors of the industry develop and change over many decades and MTE has the ability to adapt and change to meet client and projects ever changing requirements is essential.

## WHAT DOES THE FUTURE HOLD FOR MTE?

Continuous growth of our business units and advancements in product design, as well as continued investment in global MTE fabrication facilities and presence to meet new arising challenges. MTE has a successful track record having opened our state of the art facilities in Mech-Tool Korea in 2013 which has grown from strength to strength ever since.

## WHERE CAN YOU SEE THE COMPANY IN 10 YEARS?

Continuing to grow and being a worldwide based design, engineering and fabrication company servicing all key offshore and onshore market sectors.

## Anthony Jones Business Development Director Mech-Tool Engineering Ltd

Ed's Note – This is an abridged version – the full interview can be accessed by scanning/clicking on the link



MORE INFO



BROCHURE



Q&A

# THE HUMBER

## SOARING TO NEW HEIGHTS

Having now visited on more than a few occasions since our first introduction to the area some 7 years ago we have found the Humber Area the most forward looking and vibrant location in the UK. The Siemens project now in full swing may be the main story but the enthusiasm which has been experienced by the now available supply chain is overwhelming.

You will find out more details of the Siemens development throughout this major spotlight feature (the most expansive yet covering more than 80 pages); however broadly speaking not only have Siemens committed to an assembly plant in the area but also a manufacturing plant for the industry as well – the knock on effect of this decision has already been realised and unprecedented in the UK.

### UNRIVALLED ENTHUSIASM

The opportunities have been welcomed with open arms and the various organisation on both sides of the Humber have worked together to help everyone involved. The area continues to take on a degree of enthusiasm unmatched across the wind energy sector throughout Europe and beyond.

We have therefore decided to name this issue of Wind Energy Network 'The Humber Special Edition'.

### PERSONAL THANKS

May I personally take this opportunity to thank everyone who has contributed – from government officials, both local and national, to the many companies/ organisations, both large and small, and of course the advice which we have received from the leaders in the industry. It is greatly appreciated – we could not have produced the feature without you.

### FEATURE SECTIONS

With such a large feature we have decided to give it a structure much like we do with individual magazines which you may have noticed in previous editions – we have therefore broken down the feature into sizeable sections as follows...

Please enjoy finding out yourself what the region offers by reading this most interesting substantial feature.

Duncan McGilvray  
Editor | Wind Energy Network



## CONTENTS

- 36 Market Opportunities
- 42 Research & Innovation
- 48 Training
- 54 Further Education
- 60 Ports & Port Services
- 66 Operations & Maintenance
- 74 Professional Services
- 80 Denmark & The Humber
- 86 Recruitment
- 92 Engineering
- 100 Support Services
- 108 Logistics



# SUPPORTING MARKET OPPORTUNITIES AT GREEN PORT HULL

Green Port Hull has fast become the first choice as the renewables capital of the UK. Over £1billion of capital investment is currently underway in Hull, following the decision by Siemens to create a £310m offshore wind turbine blade manufacturing facility in the city.

Hull's premium port capacity, infrastructure and unique skill set provide an excellent range of opportunities for companies from across the UK and beyond involved with manufacturing, pre-assembly and installation, as well as the wider supply chain.

This is because Hull and the East Riding is home to a broad range of businesses with renewable energy support capabilities, including engineering, fabrication, logistics, vessel operation, ship building, turbine maintenance, and port services.

## A PROGRAMME OF SUPPORT FOR BUSINESSES

To access these opportunities, many companies both local, regional, national and international have utilised the support offered by Green Port Hull through the Green Port Growth Programme (GPGP).

With an investment of over £25m, the Green Port Growth Programme is supported by the Regional Growth Fund and is designed to capitalise on renewable opportunities. It develops indigenous business growth within the renewable sector, securing long-term economic growth for the region.

The programme, developed by Hull City Council, East Riding Council and private sector partners, works two-fold. It helps businesses in the Hull and East Riding access supply chain opportunities, and also assists inward investors, such as Siemens, to identify suitable local



Mark Pearson of Pearson Electrical

companies capable of supplying a range of products and services.

This includes data collection on opportunities and improving relationships with developers and original equipment manufacturers (OEMs) through a dedicated supply chain coordinator.

Another key tool is the Green Port Hull Supplier Directory, which provides information to the renewables industry on the region's suppliers, products and services. To date, more than 360 companies have registered.

Work has included helping local companies engage with key players in the renewable energy industry, such as Siemens, Energy Works, Dong, SSE and Clugston.

## ASSISTING LOCAL AND INTERNATIONAL BUSINESSES

DONG Energy approached the Green Port Growth Programme to help with a number of sourcing requirements for its Race Bank and Hornsea One windfarms. The company wanted marine services, provided by a firm based in the Humber region. With a strong knowledge of the market and providers on the Green Port Hull Supplier Directory, the Business Support Team put forward a small number of companies matching the requirement to DONG Energy.



Image credit - Credit DONG Energy A/S

“WITH AN INVESTMENT OF OVER £25M, THE GREEN PORT GROWTH PROGRAMME IS SUPPORTED BY THE REGIONAL GROWTH FUND”

Carlbom Shipping Ltd was successful and has been appointed as ships agent for DONG Energy at the Port of Immingham. Carlbom Shipping Ltd is now assisting DONG Energy with its offshore supply vessel (OSV) bringing supplies to the jack-up accommodation rig, The Atlantic Amsterdam, which is servicing Race Bank. The contract is expected to run for the duration of the construction period.

Another example of the Green Port Growth Programme's work is Hull firm Pearson Electrical, specialist electrical engineers with over 30 years of experience in the marine, industrial and hazardous area sectors. Not only did the company sign up to the Green Port

Hull Supplier Directory to access new opportunities in the green energy sector, but it utilised funding from the Green Port Growth Programme to achieve vital ISO accreditations.

As a result, Pearson Electrical has just signed a framework agreement with A2SEA, a company which owns and operates some of the wind industry's most sophisticated vessels and equipment, specially designed for turbine installation.

A2SEA was looking for a Hull-based company to undertake electrical repair work on its turbine installation vessels being used to install Siemens components. Because Pearson Electrical had its BS EN OHSAS 18001:

2007 Occupational Health and Safety accreditation, A2SEA opened talks with the business earlier this year and, in July 2016, signed a framework for work, which begins in January 2017.

## Green Port Hull



# SIGNIFICANT CONTRACT EXTENSION WIN FROM SIEMENS

Renewable energy specialist, Prontoport in Irvine, is celebrating winning an additional 2 year contract from Siemens to support the commissioning and build of several new offshore windfarms. The new contract is expected to be worth a seven figure sum each year for the next two years. Siemens is a longstanding client of the company, which already provides project design, build and engineering maintenance services to the multinational.

## ACKNOWLEDGED LEADERS

Prontoport MD, Scott Telfer commented: *"We are acknowledged leaders in windfarm construction and servicing and have already proved our worth working on previous Siemens flagship projects at Gwynt Y Mor and West of Duddon Sands. We successfully passed Siemens Global Audit Procedure and have been chosen over much larger competitors to support the work that Siemens are*



*doing in Hull, where they are investing £160 million on two manufacturing sites for the preassembly, installation and commissioning of several new offshore windfarms. We'll be supplying trained personnel, from ground and tower technicians to highly specialist engineers across a range of disciplines."*

## SIEMENS PROJECTS

The latest contract is with Siemens Projects, the part of the business which constructs new windfarms, and the initial two year period carries an option to extend for a further two years.

Prontoport carries out servicing and repairs on over 50% of the UK's Windfarm assets and has previously worked on Gwynt Y Mor Offshore, RWE's flagship Power Generation Plant; the biggest construction site in Europe at the time.

The company has been working with Siemens Projects since March 2010 and, through the industry approved Prontoport Training Academy recruits, vets and trains personnel, both to EU & Industry standards and to client and project specification.

## Prontoport Ltd

**Rotos360**

**Experts in blade repair solutions**

+44(0) 1328 710121 info@rotos360.co.uk www.rotos360.co.uk

GL, ISO 9001 REGISTERED, ISO 14001 REGISTERED, OHSAS 18001 REGISTERED

# POWERING THE ENERGY ESTUARY

**Team Humber Marine Alliance has grown into the Humber region's foremost brand for marine, offshore and associated sectors and with its longstanding relationships with Northern Europe and strengthening links with the US, its sphere of influence is taking on a global hue.**

## REPRESENTATION

Representing more than 200 member companies and their 17,000 employees, it believes their expertise and experience should be rewarded with a healthy share of the action that North Sea wind power and other industries are bringing to the region.

As the main base for the east coast offshore wind industry, along with bioethanol production, oil refineries, biomass and natural gas imports, the Humber is at the heart of meeting the country's energy needs.

## CONFIDENT FUTURE

Despite Brexit uncertainty, the future looks bright for this great trading estuary. Planned North Sea wind investments valued at £20bn, Siemens' turbine blade manufacturing facility in Hull becoming fully operational in 2017 and Dong Energy planning to open the world's largest offshore wind maintenance hub in Grimsby provide new opportunities.

Team Humber also works closely with maritime industries across the North Sea and is aligned to the EU's Blue Growth Strategy that aims for sustainable growth from the seas.

## STRENGTH IN NUMBERS

With its 'Strength in numbers' policy, Team Humber encourages collaborative bidding by member companies to bring major contracts to the region. Strongly backing the Northern Powerhouse, it has linked up with its west coast counterpart, Mersey Maritime, to promote the east-west trade corridor.

Widening horizons, it is building links with the United States eastern seaboard where offshore wind is comparatively in its infancy.



Mark O'Reilly, CEO of THMA

## BUSINESS OPPORTUNITIES

The US wind industry is in its infancy compared with the UK's, but New Bedford, which remains a thriving fishing port, will be one of its major centres and presents an opportunity for Humber firms to be involved.

## Team Humber Marine Alliance (THMA)

A senior delegation from eastern states chose the Humber this September as the place to learn about developing the technology and infrastructure to meet their country's renewable energy targets. They are keen on making business and academic connections with a view to reciprocal agreements and were impressed with the technology that is transforming the Humber region.

# BOSTON RENEWABLES – A CASE STUDY



Boston Renewables are a division of the Bostonair Group, and provide a number of renewable and low-carbon energy solutions to the commercial sector in the Yorkshire and Humber region such as solar PV arrays, wind turbines, energy storage, voltage optimisation, solar car ports and electric vehicle charging.

## CASE STUDY

Westfield Farm forms part of a modern, mixed farming enterprise. The business produces in excess of 17,000 pork and bacon pigs per year for the UK's food industry, as well as wheat, barley and oilseeds for both the UK and continental markets.

## CUSTOMER TESTIMONIAL

*"The installation went very smoothly and to timetable and we are now seeing the benefits of reduced energy costs for our business."*  
 Denis Lockwood, Finance Director – on behalf of Pitwherry Ltd



## THE DETAIL...

- Customer – Westfield Farm
- Existing on electricity site use – 400,000 kWh P/A
- Renewable generation – 300,000 kWh P/A
- Reduction in grid supplied electricity – 60%
- Tonnes of CO2 saved – 163T P/A

## THE CHALLENGE

Recent years have seen an increasing demand from food processors and consumers for ethically sourced food produce. Kingsmill Bakers advertise that they are 'Slicing Emissions' and other food processors have similar tag lines. And so the challenge at Westfield was for the business to demonstrate a reduced energy overhead and carbon footprint.

## THE SOLUTION

Having successfully won a Planning Appeal against National Air Traffic Services, Boston Renewables installed two 80kW Endurance E3120 wind turbines at Westfield Farm. The turbines were installed under Ofgem's capacity extension system to ensure the maximum benefit from the Feed In Tariff scheme, one in October 2014 and the second in March 2015. The majority of the annual generation of circa 300,000kWh of green electricity is used on site to power automatic livestock feeding and ventilation systems. The wind turbines were installed with the assistance of Boston Energy technicians.

## Boston Renewables

# THE HUMBER RENEWABLES AWARDS

## The most important date on the Humber region's clean power calendar

The Humber Renewables Awards hosted by the Hull Daily Mail is returning for a sixth year and will recognise success across nine categories, honouring firms large and small for doing their bit to make this area a fulcrum of green energy. This annual event is to recognise and celebrate the great strides being taken across the Humber region in the renewables industry. For companies ranging from small start-ups to large corporations in the sector, the awards are an opportunity to highlight good practice, innovation and enterprise.

## BEST OF THE BEST

With prizes up for grabs for educators, builders and innovators, the competition promises to reward the best of the best, with the celebration taking place at The Deep, Hull on Thursday, March 9, 2017.

Hosted by ITV Weather presenter, Emma Jesson who will be accompanied by a top speaker, the dinner will gather together industry leaders and experts from across the region and beyond providing excellent networking opportunities.

## SPONSOR – SIEMENS

The awards event is again being sponsored by Siemens, which is developing a £310m offshore wind hub at Alexandra Dock, Hull.

Jason Speedy is the Director of the energy giant's turbine blade factory, which is due to mark the production of the first blade, wholly manufactured at the new facility, next month.

## INVESTMENT

Jason stated: *"Our investment in Hull is one of Siemens' largest anywhere in the world and is the city's biggest ever inward investment. We're here because Hull is perfectly positioned in close proximity to the huge offshore windfarms in the North Sea."*



*"We also believed we would be coming to an area with a supportive environment for our investment and where we could build a skilled workforce to develop a new industry for the UK. We're delighted our confidence has proven to be well founded – the support we have received has been outstanding."*

## LOCAL IMPACT

Jason continued *"We have been made to feel very welcome and we believe that, in return, we have demonstrated our commitment to maximise our positive impact on the city and region, its economy, communities and people. Our greatest local impact will be in new jobs and we are well on the way to our target to employ 1,000 people across our operations at Alexandra Dock."*

*"We're delighted to report that well over 90 per cent of the people we have recruited are from the Hull area – we have been absolutely overwhelmed by the response to the jobs we have created, with more than 23,000 applications so far. That's an incredible number and has resulted in us recruiting a workforce of truly amazing people."*

## COMMITMENT

Jason concluded *"Our headline sponsorship of the Humber Renewables Awards is part of our commitment to put down roots in the Hull area and contribute to the growth of the local economy, above and beyond our direct investment."*

## NOMINATIONS AND CATEGORIES

Awards nominations are now open and entries need to be submitted by Wednesday, February 8th 2017

CATEGORY	SPONSOR
Humber Renewables Champion	<b>Siemens</b>
Best Renewable Energy Project or Installation in the Humber Area	<b>Pure Broadband</b>
Excellence in Renewable Skills and Training	<b>RSM</b>
Renewables Education	<b>Hull College</b>
Renewables Innovation	<b>ABP</b>
Humber Renewables Medium/Large Business of the Year (over 50 employees)	<b>KRL</b>
Engaging the Community	<b>Spencer Group</b>
Rising Star	<b>Arco</b>
Humber Renewables Small Business of the Year (under 50 employees)	<b>Cobus Communications</b>



Jane Smallwood  
 Events Manager  
**Humber Renewables Awards**



## Is your business looking to capitalise on Hull's emerging renewable energy sector?

If so find out how the Green Port Growth Programme can help your company\* unlock its potential.

### Assistance and funding opportunities are available for:

- Business Support and Advice - identify business needs and provide support in areas such as H&S, Quality Management and Accreditations
- Employment and Skills Development - wage subsidies for Level 3 Apprenticeships and training subsidies to up-skill your existing workforce
- Business Grants - launch a new business or expand an existing business with a variety of growth and capital investment grants
- Research, Development & Innovation - development of new, innovative products and services
- Home and Export Market Development - networking and sales opportunities through trade visits and exhibitions
- Business Improvement - a workshop programme to improve business knowledge and efficiency
- Connecting With Buyers - promote your company through the Green Port Hull Supplier Directory

To find out how your company can benefit, contact the business support team on 01482 391639, email [greenportgrowth@eastriding.gov.uk](mailto:greenportgrowth@eastriding.gov.uk) or visit [www.greenporthull.co.uk](http://www.greenporthull.co.uk)



\*Businesses must be located in Hull and the East Riding of Yorkshire

# PROJECT AURA GENERATES WINDS OF CHANGE ON THE HUMBER



As offshore wind energy progresses towards becoming established as the low-carbon, low-cost energy source for the UK, it has found a home on the Humber. Recent major investments in the region from leading offshore wind power manufacturers and producers, in particular from DONG Energy and Siemens, place the Humber at the centre of the rapid global growth in the sector. These substantial commitments are opening up tangible opportunities for the region to support and help develop the sector – for the whole country and internationally.

## CHALLENGES

But the offshore wind industry is still a relatively immature business. Operational and maintenance activity, in particular, are undergoing rapid development and expansion. A number of challenges characterise advancement at this pace, including strong demand for sector specific skills in a scarce market and relatively low levels of standardisation within the sector in areas such as training and health and safety.

This can drive up operational costs, including for investors and insurers, adding to the overall cost of producing energy. Comparatively immature networks and supply chains may also present challenges and the need for innovation to keep pace with a dramatically fast-evolving sector is demanding.

## CENTRAL ROLE

The University of Hull is ideally placed to play a central role in helping to meet these challenges, and so support and facilitate offshore wind growth. With more than 15 years' experience of working in the sector, and having been involved in providing expert advice and reports for more than half of the current generation output of UK offshore windfarms through its Institute for Estuarine and Coastal Studies, the University boasts a wide range of relevant expertise and capability.

## WORLD-LEADING RESEARCH

With world-leading research into the marine environment and seabed conditions, the University has conducted experimental modelling to examine

novel foundation systems for offshore wind turbines using its unique Total Environment Simulator. Further, expertise in control and intelligent systems engineering sees robust modelling methods applied to the industrial control problems of offshore wind turbines. The University is also helping to develop knowledge around condition monitoring, fault-tolerance and control design.

## LOGISTICS INSTITUTE

The University's Logistics Institute is playing a key role in helping to understand the influence of the renewables sector in the Humber through a study of social, economic and environmental impacts across the region and supply chain. Professor Amar Ramudhin, Director of the Logistics Institute, commented: *"This is a once-in-a-generation opportunity to make the Humber the UK powerhouse for offshore wind. This project will ensure that we capitalise on the gains already made."*

Researchers from the University's Risk Institute are investigating human factors in risk management, to get a more

complete picture of the effects of working in challenging offshore environments. A new €3 million project in collaboration with partners across the UK and Europe will consider factors such as weather, distances and crew fatigue. Novel tools will be developed to support decision-making to optimise crew transfers and offshore missions, therefore helping to reduce risk and enhance efficiency. This is complemented by exciting advances in the University's Digital Centre where 3D visualisation technologies have enabled conditions on offshore windfarms to be simulated digitally to support recruitment, testing and training.

## OPPORTUNITIES AND BENEFITS

The challenges are real but the opportunities and benefits are potentially significant and far reaching for all stakeholders – regionally, nationally and internationally. It means that the Humber is at the start of a collaborative adventure to ensure that the region brings together all the best people with the knowledge, skills and innovative thinking that this exciting industry is demanding.

## ACTION

Three main strands of action are now needed to meet the challenges facing the sector...

1. Proactive engagement between the sector and the University to promote enterprise throughout the supply chain
2. Research, development and innovation
3. Attracting talented people, equipped with the skills, training and knowledge needed to support the industry and enable it to grow

## PROJECT AURA

Building on its expertise and experience, the University of Hull will invest further in areas that complement renewable energy needs. It is ideally placed to work with major players in the sector and others to lead delivery on these actions through an initiative termed Project Aura.

Project Aura will provide the focus for the offshore wind sector to connect and build all these partnerships. To fill

the skills gap, the university envisages leading the development of a talent pipeline from ages 14 to 70+, based in the Humber region with national and international reach. Skills hubs will provide effective and relevant vocational and academic courses of consistent quality, including professional development to postgraduate level, meeting industry needs.

## NEW PURPOSE-BUILT CENTRE

Eventually a new purpose-built centre will fulfil a role as a front door and home base for the industry with access to facilities for research, development and innovation as well as a knowledge bank and a technology hub with space for networking, training and education, conferences and meetings.

## University of Hull - Logistics Institute



# FISHERMEN AND OFFSHORE WINDFARM DEVELOPERS MUST WORK TOGETHER

The chairman elect of the NFFO (National Federation of Fishermen's Organisations) Mike Cohen says fishermen and windfarm developers must learn to work together.

Mike commented: "We need to coexist because they are going to be here whether we like it or not. It is in everyone's interest to find a working relationship that benefits everybody."

## RAPID DEVELOPMENT

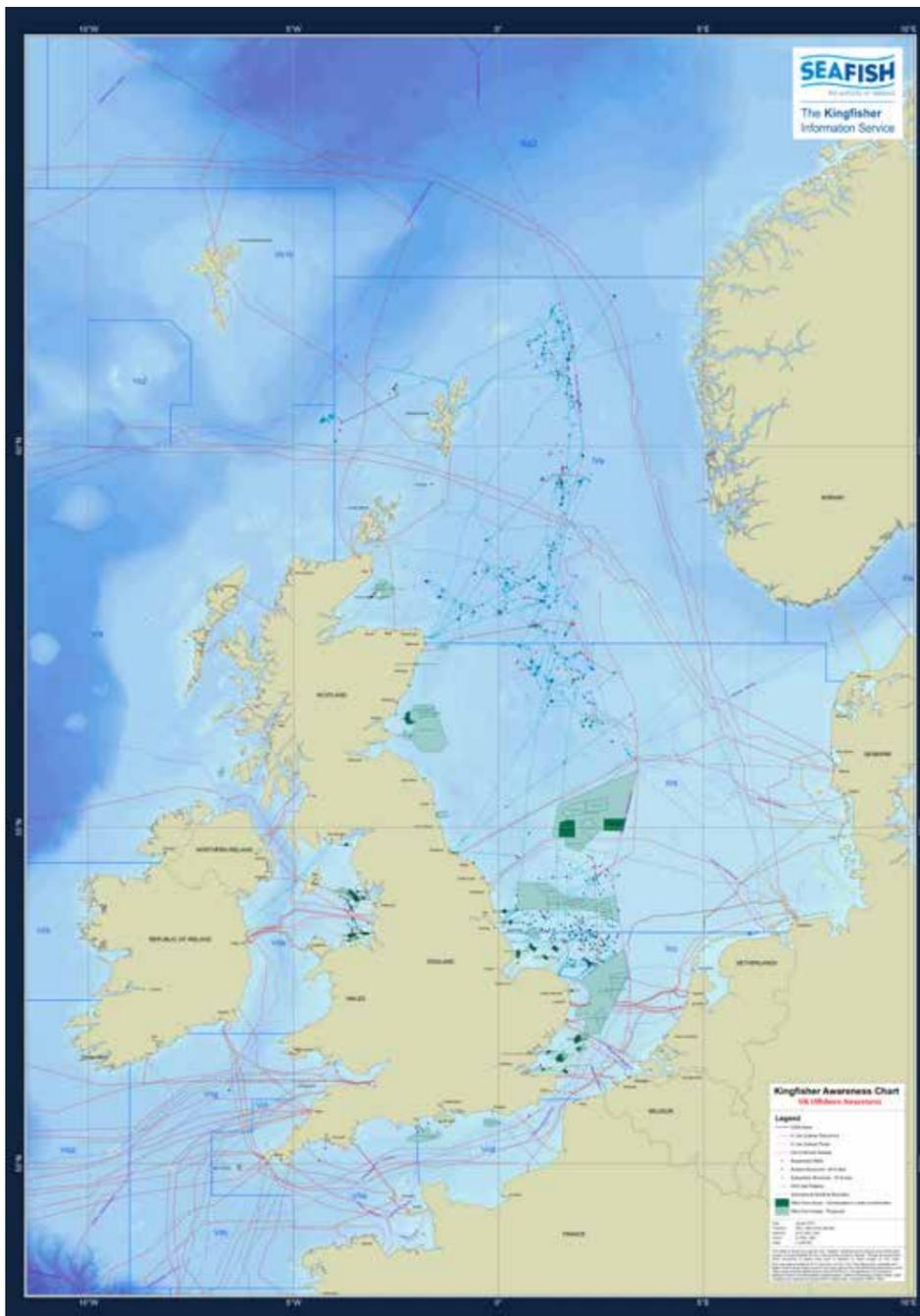
The development of offshore windfarms has been a controversial issue in the fishing industry, with fishermen fearful of poorly positioned sites, the effect on stock levels and the limitations on fishing activities.

There are currently 29 windfarms constructed around the country, with a further 34 offshore developments also in the pipeline around the country. This means that more fishermen will find themselves having to learn to live with turbines and associated cabling at sea.

Mr Cohen has witnessed a number of windfarms being developed in his area and he has experience of working with developers due to his role as CEO of Holderness Fishing Industry Group and he says that a good working relationship between fishermen and windfarm developers is crucial to the success of both industries.

## GOODWILL

He stated: "They are going to be here for 20 to 25 years, and we are going to be here a lot longer than that. So we have got to get on. That takes a significant amount of goodwill on both sides. It is one thing to have a contractual agreement that defines roles and responsibilities, but there has to be a pragmatic aspect as well to enable two industries to get along, while occupying the same space."



## EASING THE PROCESS

To ease the process of coexistence, Kingfisher Information of Seafish continues to develop the KIS-ORCA service with Subsea Cables UK and RenewableUK, charting positional data for fishing plotters. Matt Frow, Kingfisher Manager, commented: "There is a huge amount of information on KIS-ORCA; all easy to install. It's not just about the turbines, there's a lot of subsea cables, concrete mattresses and hazards that skippers need to be aware of". KIS-ORCA aims to provide the locations of cable and renewable structures in a bid to keep fishermen informed and safe.

Mike also praised the data for plotters, which is free to use. He added: "Most people receive the Kingfisher maps and plotter files here and I'd highly recommend them to skippers. I have helped people install them on plotters, and it is a very useful resource.

"The main thing is going to be exact locations of turbines and cables. We know generally where things are planned for, as we get the information from developers before construction starts, but there are small changes in positions as construction progresses.

"Having it all in one place as a definitive exact location for turbines, and cables, and that sort of thing, that is very useful. And having it in a format that can go straight on to someone's plotter massively reduces the chances of error, which is obviously very important."

## MAINTAINING COMMUNICATION LINKS

Former skipper Tom Watson is a liaison officer in Fleetwood, who ensures the communication lines between fishermen and developers remain open, commented: "The

Kingfisher plotter data is excellent and a necessary tool for working fishermen. I am always telling fishermen about the function and how to use it, and how if it's put on their plotter, they'll get pictures of the windfarm on their screen. I think it's first class and I share that around."

Tom also added "You have to destroy the myth that it's the end of the world. I'm not pro-windfarm – not by a long way. But you've got to learn to live with it. If you don't learn to live with it, it'll put you out of work."

## UNFOUNDED CONCERN

Tom Watson is aware of fishing industry concern over stock levels changes pre and post development and explained: "We do know that during the building and construction in the Irish Sea that we asked for fisheries projects where a commercial boat fished in the area before, during, and after construction. What we found was that the species caught and the amount caught was pretty much the same at each stage."

During construction and maintenance of offshore windfarms, fishermen may be restricted to where they can fish. However, when operational, there is no legislation stopping fishing within windfarms. Operators may apply for a 50m safety zone around turbines, or they may agree with fishermen to an advisory safety zone of the same size, which helps with fishing safety and protection of structures. All turbines on the KIS-ORCA data have the 50m zone mapped to help skippers.

"HOLDERNESS FISHING INDUSTRY GROUP AND HE SAYS THAT A GOOD WORKING RELATIONSHIP BETWEEN FISHERMEN AND WINDFARM DEVELOPERS IS CRUCIAL"

## CAUTION IN CERTAIN CONDITIONS

Mike Cohen who expressed the need to fish with caution in certain conditions: "You have to keep a close eye on things and I really wouldn't want to be in amongst the turbines in less than ideal conditions. If there was a strong wind blowing and you're moving around as you're hauling gear, you're vulnerable. If a string of pots get wrapped around a wind turbine, you've probably lost that. That means you've lost a lot of expensive gear, not to mention your lost fishing capacity and a risk to your safety."

Tom Watson also confirmed that he has experience of the potential hazard that cables can cause, with cables becoming exposed due to shifting seabed - some staying exposed. Because of this, there is a real need for fishermen to exercise caution close to cables and keep in contact with the latest updates.

## IN SUMMARY

Filippo Locatelli, Offshore Wind Development Manager at RenewableUK summarised the importance of coexistence from an industry standpoint: "For successful development of an offshore windfarm, early dialogue with fishermen and their representatives is essential. To achieve coexistence, open communication is vital to the successful construction and operation of an offshore windfarm. The information supplied via the Kingfisher Bulletin and KIS-ORCA is important to this process."

## Seafish



# ENSURING THE SUPPLY OF RENEWABLE ENERGY

Through its investment and engineering capabilities, Balfour Beatty believes it is well positioned to support industry plans to harvest some of the UK's most remote renewable energy sources.

## INDUSTRY CHALLENGE

The UK Government has set targets committing the country to generate 15% of its energy needs from renewable sources by 2020. Offshore wind makes a significant contribution in helping the UK to achieve these objectives and having the necessary infrastructure in place to connect windfarms to the onshore electricity grid is equally critical.

## CONNECTING HULL & HUMBER

In 2012, Balfour Beatty was awarded a contract to design, supply, install and commission 30km of 132kV land cable to connect E.ON's Humber Gateway windfarm (OFTO) to the UK's electricity network at Hedon substation in Hull. The windfarm is situated 8km off the

East Yorkshire coast and consists of 73 turbines which are capable of generating 219MW of electricity – enough to power around 170,000 homes each year.

In September 2016, Balfour Beatty, in consortium with Equitix, was selected by Ofgem to own and operate the offshore transmission link to E.ON's Humber Gateway windfarm for the next 20 years. Balfour Beatty's Power Transmission & Distribution business is also responsible for the operation and maintenance of the OFTO's assets.

## EXPERIENCE & DELIVERY

This is the company's fourth operations and maintenance contract to provide full asset management services on OFTOs. It also marks a step change in contracting philosophy in the OFTO service sector

as they move from a deterministic approach to a probabilistic outputs based approach, challenging contractors to reduce costs through recognising efficiencies ensuring tasks are carried out more efficiently to reduce costs.

With a team of specialist engineers and carefully selected strategic supply chain partners in place, Balfour Beatty will manage and operate one onshore and one offshore substation, 18km of subsea cable and 30km of land cable.

## SERVICES

They will also deliver a number of services which include: operational control, safety and switching services, routine and reactive maintenance (including first response) and marine services, including personnel access and subsea surveys on both the offshore export cable route and substation platform.

**Balfour Beatty**



**BLACKROW ENGINEERING**

Perfectly positioned to meet the needs of the offshore wind sector with 150'000 Sq Ft of Fabrication & Engineering Facility

**SERVICES**

- Fabrication
- Machining & Laser Cutting
- Electrical Contractors

Contact  
**01472 889200**

Website  
**www.blackrow.co.uk**



**McAUSLAND TURNER**  
SINCE 1888

McAusland Turner have been providing advice and support since 1888. Our people are the company's greatest asset offering experience and professional expertise. M & T are also Lloyd's Agents for the East Coast of England.

**www.mcauslands.com**  
+44 (0) 1482 223832



**Windtex**

Our experienced technicians tackle the most demanding of requirements with precision and efficiency



- Scheduled Turbine Maintenance
- Rope Access Solutions
- Statutory Inspections
- Met Mast Maintenance and Inspection
- Blade Inspection and Repair

T 01925 245 238 E info@windtex.co.uk  
**www.windtex.co.uk**



Specialists in whole-life cable engineering and training solutions for offshore wind, wave and tidal.

**Experts in:**

- ✦ Risk assessment
- ✦ Route design and optimisation
- ✦ Stability analysis
- ✦ Span assessments
- ✦ Installation analysis

Reducing project cost and risk.

**Call +44 1732 371 371**

**Email info@jee.co.uk**

**Visit www.jee.co.uk**

HUMBER UPDATE

HUMBER UPDATE

# PLAN, PRACTICE, APPRAISE AND REPRISE

## Why your organisation can never be over-prepared for handling an emergency incident

Can you confidently say that your employees are trained to perform when it matters most? Under the pressure of a live emergency, with a life potentially at risk, will they have the competency and confidence to recall and react as required?

The key is to implement a range of business resilience, emergency and contingency planning solutions, incorporating the following measures...

- Review of existing emergency response procedures
- Creation of full written emergency response plans
- Review, testing and updating of those plans and procedures
- Design, implementation, review and testing of associated rescue plans

### APPRAISE, REPRISE, PLAN AND PRACTICE

No matter how thorough your planning and risk assessment... *"it is the execution of procedures when under extreme pressure which will determine their success"*. It is critical to equip all personnel with the cognitive skills to manage an emergency in such a high-risk environment.

Take a detailed look at your existing plans, procedures and training resources...

- Does your training relate to real risks that have been identified at the operating site?
- Does your in-house response team have relevant insight? Have they had first-hand exposure to the scenarios that could be faced?
- Does your training give your team members the opportunity to walk through the events likely to occur in an emergency?
- Do your facilities and equipment enable true familiarisation with a required procedure?

Only through regular and frequent specialist training can an organisation fully prepare its workforce for an emergency.

Humber-based HFR Solutions CIC was established in 2012 to share the skills, values, knowledge and expertise of Humber Fire and Rescue Service (HFRS) with the commercial sector. Directly aligned with HFRS, they are a leading provider of risk prevention and emergency response.

Experts in emergency planning and testing for the energy and renewables sectors, with a vast experience in providing realistic simulations both on and off site, the company is able to identify all the credible scenarios and complete a Fire Risk Assessment of an offshore wind turbine.

### LEADING RENEWABLES AND POWER GENERATION ORGANISATION ENTRUSTS HFR SOLUTIONS CIC WITH EMERGENCY RESPONSE TRAINING

Recently a leading operator from the renewables and power generation sector, approached HFR Solutions CIC to help review their existing emergency procedures, undertaking a series of intensive incident and emergency coordination training initiatives. The tailored training tested their emergency response plans as well as their decision-making processes, when under pressure.

### TESTING DECISION-MAKING AND TEAMWORK THROUGH TAILORED PRACTICAL SCENARIOS

Their existing emergency response procedures were reviewed during three practical scenarios. HFR Solutions CIC designed the exercises, in association with the client, based on credible scenarios identified from the risk profile of their operational site based within the Humber region and included...

- Man-overboard at a transition point
- Turbine fire affecting workers in the nacelle
- Hub rescue of a live casualty suffering a life-threatening injury

The exercise objectives were to confirm knowledge and understanding

of the training provided, to test this organisation's emergency response plans and to test the team's decision-making strategies and approach to teamwork.

### FOUR KEY ELEMENTS OF INCIDENT MANAGEMENT

1. **Site specific information** – this element of the initiative enabled this organisation's own systems to be incorporated into the course, covering their own emergency response plans and how they are applied to emergency situations
2. **Clarity and communication** – delegates were introduced to the incident command systems which are used nationally by the emergency services and many companies, looking at how they overlap with the organisation's own systems. This included the information required for a succinct and specific handover to emergency services or to colleagues relieving personnel from a post and for ensuring essential information is conveyed expediently. For instance, formalised training in radio protocols could help to ensure that critical messages are given priority by use of certain priority phraseology
3. **Decision making** – balanced decisions are vital at an emergency and to prepare for this, the course covered the decision-making model, considering the risks against the potential benefits
4. **Debriefing** – the opportunity to reflect on what has been learned about an individual, team and their procedures is an essential process for ongoing refinement and so the organisation received guidance on the rules to adopt during a debrief



“ONLY THROUGH REGULAR AND FREQUENT SPECIALIST TRAINING CAN AN ORGANISATION FULLY PREPARE ITS WORKFORCE FOR AN EMERGENCY.”

### THE IMPORTANCE OF INCIDENT MANAGEMENT

To operate safely within the offshore wind environment the delegates were given the opportunity to develop an understanding of why incidents occur, likely reactions and how to positively influence behaviour to achieve a successful outcome in the event of an incident.

The delegates included various operational team members – including controllers, technicians and vessel crew members. Although each of these operational teams has their own respective roles and responsibilities, it is

critical that they work together effectively. Therefore, emphasis was placed on the importance of the interaction between the various roles and teams while simultaneously conducting their respective procedures.

### EMERGENCY RESPONSE PLANS TESTED THROUGH PRACTICAL INPUT AND WORKING SCENARIOS

With practice being central to the successful application of a procedure in a crisis scenario, delegates were provided with a combination of simulated incidents using live casualties and dummies. The exercises incorporated all three stages of an incident: initial, developing and closing.

Each exercise required delegates to undertake a rescue of themselves or others from a simulated incident at a standalone dedicated training area (Working at Height structure and Dock) with Skippers and Controllers placed in separate locations. This segregation created the dynamics of an actual incident, demonstrating the challenges that response teams face.

Proactive use of technology enabled all delegates to see how the exercise was progressing – even when positioned in different parts of the building to the main exercise by connecting via Skype on mobile devices.

### THE NEXT STEPS

HFR Solutions CIC has produced a comprehensive report to further improve the client's existing plans and procedures and continues to support them in developing rescue plans and a programme of ongoing training and assessment. This will help to provide consistency across all personnel and sites and help to address any potential occurrence of skill fade through lack of familiarity with techniques and equipment.

### HFR Solutions CIC



HUMBER UPDATE

HUMBER UPDATE



# DELIVERING INNOVATIVE AND COLLABORATIVE SKILLS SOLUTIONS

The Engineering Construction Industry Training Board (ECITB) has over 25 years' experience working with employers to deliver innovative and collaborative skills solutions across the energy sector, including wind.

A statutory skills body, the organisation has supported over 1.5 million learners with over £380m investment in a range of craft, technical and managerial skills required by industry. The organisation has developed many pioneering qualifications and training standards, which are delivered by approved training providers, including the Hydraulically Torque and Tension Wind Turbine Bolted Connections qualification. It is also working with employers to develop new apprenticeship standards, including the Maintenance & Operations Engineering Technician which has a dedicated wind turbine technician pathway.

training providers, the ECITB is well placed to transfer knowledge and experience to the renewables sector, including in critical areas such as health and safety, to support the industry's skills needs.

## COMPREHENSIVE PORTFOLIO

The organisation has a comprehensive portfolio of training solutions including supervisory and management training. Their supervisory training offers easy to access, intensive modular courses which upon successful completion of all modules leads to the award of the ECITB Silver card. Their management training includes nationally recognised qualifications and upon completion of the NVQ Level 3 management qualification learners receive an Assuring Competency in Engineering (ACE) card.

These cards provide confirmation that the individual has achieved a recognised standard of competency, boosting the productivity of performance and productivity of industry and helping to mitigate supervisory and management risk.

## COST EFFICIENCY

With the wind sector, like other industries, under pressure to reduce costs, it is important that contractors and clients alike look to improve their cost efficiency of projects.

## ECITB

“SUPPORTED OVER 1.5 MILLION LEARNERS WITH OVER £380M INVESTMENT...”

## BRITAIN'S ENERGY COAST

ECITB has a strong presence on Britain's Energy Coast with regional operations supporting employers and learners. Working with employers, local skills agencies and its network of approved



# INDUSTRY LED PRACTICAL TRAINING

HETA are the Yorkshire and Humber regions leading Engineering Training Provider and since establishment in 1967 have developed industry led practical training programmes for apprentices and existing engineers.

Since 2010, HETA have been active in the wind industry and are currently delivering programmes for Centrica, SSE, EON, Vestas and Ecotricity.

James McIntosh, HETA's Business Development and Marketing Manager commented: "We were the first in our area to take steps to match the needs of local renewable companies, and we are the only local provider who can offer an approved City & Guilds Wind Turbine Technician apprenticeship course."

## APPRENTICESHIPS

The apprenticeship comprises of a year off the job spent in the training centre, 4 days a week of this time is spent in the workshop covering electrical, mechanical, instrumentation, pneumatics and hydraulics skills. In addition to this the apprentices learn the underpinning theory knowledge in the classroom which means when they come into company full time from Year 2 they can contribute straight away to practical tasks.

James continued: "We also deliver a number of national and regional contracts where employers send their learners to us from all across the UK to use the accommodation partner we have to complete the first year full time training programme."

## ADULT TRAINING

"The training is also relevant to adults – people generally who are working for wind turbine companies and are engineers. They might already have done an apprenticeship in a different industry at a time when this qualification wasn't available. They might be qualified engineers who don't have anything to say they are competent to work on wind turbines, and we are in discussions with a number of the country's leading operations and maintenance companies to train their employees."

## FUTURE EXPECTATIONS

HETA is also expecting more of the service companies in the area are going to come on board and train their staff using this qualification to prove their competence in industry as wind turbine technicians.

## HETA





L-R: Mr Dif, Charlotte Buttery, Alicia Trew, Jahnina Queddeng, Abbie Cook and Adrian Jarvis (HMN).

# STUDENT TEAM CROWNED NATIONAL WINNERS

Global Marine Systems Limited, with joint venture partner Huawei Marine Networks (HMN), has mentored a team of four, sixth form students to the 2016 Engineering Education Scheme (EES) National finals where they were crowned champions.

## THE TEAM

The team, comprising of students from the Brentwood Ursuline Convent High School including Charlotte Buttery, Jahnina Queddeng, Alicia Trew and Abbie Cook, undertook a six-month engineering project with the EES, a programme run by education charity, the Engineering Development Trust. At the 2016 finals held at the Institute for Engineering and Technology in London on Wednesday 7th September, the team was announced as the overall winners, surpassing over 260 schools from across the country.

## ENGINEERING EDUCATION SCHEME

The EES provides students the opportunity to work on commercial projects within a range of engineering companies; a rare and powerful educational experience for the young adults from Brentwood Ursuline. Over a six month period, the team designed, constructed and developed a tar cleaning device known as the 'Tarminator' which has been adopted by HMN and is expected to bring both time and cost savings during the maintenance of transatlantic communication cables.

HMN engineer and scheme mentor Adrian Jarvis said, "The students exceeded our expectations in developing a product that solved a real problem for us, with the added bonus of winning the national award. It has been a pleasure working with the students who have developed many new skills and grown into confident young professionals. I wish them all well for their future in their chosen profession and would like to personally thank Mr Dif, Head of Physics at the school, and the students for their enthusiastic support."

## GREAT EXPERIENCE AND ACHIEVEMENT

Head of Physics at Brentwood Ursuline, Mr Dif said, "This represents a great achievement for the girls who have become role models to their younger peers at school where interest in engineering is growing."

Student Abbie Cook said, "The scheme has been invaluable in both my choice of A level studies, as well as my future career. Winning the EES national competition was truly amazing and the feedback we had from the judges and public was very inspiring."

Fellow student, Alicia Trew also commented, "The EES project has been an amazing experience. Before entering the project, I had an ambition to enter into a career in engineering. After finishing the project as national winner, I am one hundred percent certain that engineering is the career I would like to follow."

## STEM CLUB

Following the project success, the team has gone on to set up their own science, technology, engineering and maths (STEM) club at school, helping to inspire younger students and grow their passion for engineering further as they look to pursue their learning at university next year.

The 'Tarminator' itself has a bright future and is currently going through a more rigorous product testing and commercialisation process with the view to it becoming a standard piece of equipment on both HMN and Global Marine vessels based across the globe.

## Global Marine Systems



## IS TRAINING SUFFICIENT TO GUARANTEE COMPETENCE IN THE OFFSHORE RENEWABLE INDUSTRY?

The Offshore Renewable Industry has invested time and money in developing, and implementing training programmes, which make sure personnel are trained in safety critical, technical and operational activities.

Mr Richard Warburton, Managing Director for Maritime Training & Competence Solutions (MTCS), asks the question: "But how far do all these training programmes go in making absolutely certain an individual is competent? It can be argued that generic shore based training does help an individual in achieving competence, however it does not necessarily guarantee they are competent in the context of the environment in which they work."

## PRESUMPTION

"There is often the presumption that by training an individual they will automatically become competent! Training may include some element of assessment, but this often takes place in a safe, controlled and non-contextual environment. MTCS Competence programmes, firmly established in the oil and gas industry, make sure candidates are assessed in the workplace by trained and qualified, occupationally competent supervisors."

## EXPERIENCE

MTCS have over 15 years' experience in working with Offshore Contracting companies to provide robust and fully accredited programmes, with the aim of certifying their personnel are competent in safety critical activities.

A certificate of competence is mandatory in the oil and gas industry for many safety critical activities. Their fully accredited competence schemes provide an effective 'Risk Management' tool; whilst ensuring employers are fully meeting their obligations of relevant safety legislation.

## ESTABLISHING COMPETENCY REQUIREMENTS

MTCS are now in the process of speaking to the Offshore Renewable Industry to establish their competency requirements.

Richard concludes: "We have received a number of positive responses from the industry and we are now inviting organisations to engage further with us, so that we may provide further insight into how our proven, fully accredited, top-class, competence management programmes can be used in managing the construction and operation of offshore windfarms."

MTCS (UK) Ltd

## HOTA: The Centre of Excellence for Nationally Approved Training

- Offshore
- Maritime
- Renewable
- ERRV
- RYA
- First Aid
- Electrical
- Health & Safety
- Firefighting
- Emergency Response

'Providing Quality Training For Over 25 Years'

For further information contact us on:

T 01482 820 567

W www.hota.org



**HETA**  
Engineering The Future

Delivering Wind Energy Training For Industry

T 01482 826635

W heta.co.uk



# MEETING THE NEEDS OF THE WIND ENERGY INDUSTRY

The Grimsby Institute's Engineering and Renewables Centre is ideally situated in the heart of Grimsby and in an excellent position to be a part of the UK's Energy Estuary.

The Institute employs a team of industrially experienced tutors who are continually updating their skills to understand the needs of the ever-changing engineering sector. As part of their commitment to learners and in order to meet the needs of the wind industry they have spent a vast amount of time consulting with a number of key employers within the wind energy sector to assess their training and development needs.

and Renewables Centre has seen much investment and offers some of the most up-to-date training equipment and industry standard workshops in the UK with learners able to access a fully operational wind turbine demonstrator, solar thermal systems, photovoltaic equipment, ground and air source heat pumps, bio-mass boilers and a fully operational rainwater harvesting system.

## WORKING TOGETHER

The Institute works closely with the renewable energy industry, including developing offshore wind turbine operations and maintenance employers. Dong Energy, the world leader in offshore wind power have invested heavily in the Humber region and have been incredibly supportive in sharing their training needs and the types of professionals they are looking to recruit.

As a result of the information from Dong Energy and the work carried out with other employers, it has allowed them to identify the skills gaps in the industry ensuring they are providing the industry with learners who are fully equipped and work ready for careers in the wind sector.

## INDUSTRY SPECIFIC LINKS AND INVESTMENT

The Grimsby Institute sits on the board of the Grimsby Renewable Partnership and are members of Renewable UK, which enables them to be at the forefront of any training requirements. The Engineering

“THE INSTITUTE IS WELL POSITIONED AT THE HEART OF THE ENERGY ESTUARY TO PROVIDE THE VERY BEST IN TRAINING...”

Neil Bainbridge, Grimsby Institute Associate Principal, Advanced Technologies commented:

*“The Institute is well positioned at the heart of the energy estuary to provide the very best in training for the renewable sector. We are looking forward to an exciting future working with employers and have invested over ¼ million pounds in state-of-the-art equipment and facilities in order to ensure the very best of service to industry.”*



## QUALIFICATIONS

To enable existing engineers to upskill and meet the needs of the industry we are continually developing a range of appropriate qualifications for the wind industry such as operations maintenance on wind turbines, rope access training and relevant safety certificates.

## APPRENTICESHIPS

Apprenticeships are an effective way for engineering companies to expand

their workforce. As part of the Institute's provision they offer a number of apprenticeships in engineering which are delivered at both the Nuns Corner site in Grimsby and the Centre for the Assessment of Technical Competence-Humber (CATCH) in Stallingborough.

The industrial programme team at CATCH are well placed on the Humber bank to deliver Advanced Apprenticeships including wind turbine maintenance apprenticeships which looking forward will be in much demand due to the region's potential growth.

## EMPLOYMENT OPPORTUNITIES

There will be a number of employment opportunities in the region over the next 25 years particularly focusing on the maintenance of wind turbines for highly skilled electrical and mechanical engineers.

## FUTURE

With further investment planned in the future the institute aims to provide not only the very best of training and teaching and learning but also to have a

world class facility in order to meet the expectations of the industry both locally and nationally.

## Grimsby Institute



SCAN/CLICK

WEBSITE



SCAN/CLICK

MORE INFO



SCAN/CLICK

MORE INFO



# TRAINING IN COMPOSITES MANUFACTURE AND REPAIR SKILLS

In March 2016, Hull College Group launched a new state-of-the-art Composites Training Centre and revealed plans for further investment to support the growth of key industries.

Over £1 million has been invested to convert the former construction skills facility in Hull into one of only a few centres in the UK specialising in training in manufacturing and repair skills using composite materials for the wind industry.

Composite materials are key to a number of important and growing industries, such as wind power, aerospace, automotive and marine. Hull College Group aim to expand the capabilities and portfolio to provide training to organisations within the caravan, boat, plastic forming and roofing industries. Training available at the Composites Centre in the lay-up and use of Epoxy Resin materials meets UK and Danish standards.

## SIEMENS

The first customer to utilise the centre was Siemens, who are using the facilities to train their entire workforce for the new Hull 75 metre offshore wind turbine blade factory. The centre houses a wind turbine 'blade school' which replicates, in miniature, the processes within the new blade factory, and across a period of 14 months, all 800 operational staff will have completed their first and second stage training in the facility.

## UNIQUE TRAINING

Hull College Principal Graham Towse said: "The training we provide at the centre is unique to the UK and has already played a vital part in delivering the skills to establish a world-class wind power manufacturing operation in Hull. However, through further investment in workshops and training spaces we intend to significantly expand our composites manufacturing training offer. We are investing in a skills infrastructure to support the growth of existing and new businesses and the creation of skilled jobs."

Hull College Group

# BESPOKE TRAINING COURSE FOR DONG ENERGY AND SIEMENS

Ever since the wind power giants dropped their anchor in Grimsby, many local businesses have benefitted and been able to expand their business product/service offerings. One local business that supplies equipment and provides inspection and testing services to the oil, gas and wind industry, has been able to expand into an area they never thought they would.

## DEVELOPING A BESPOKE TRAINING COURSE

In a meeting with Dong Energy, Business Manager Ashley Wright from Hammond & Taylor was challenged with the task of developing a bespoke training course. The course would be for Dong Energy and Siemens technicians. The course was based around safety equipment that Hammond & Taylor provide. "I was thrilled they had asked us to look into this for them and I wasted no time in getting things sorted." Ashley commented.

## AIS TRAINING

Ashley spoke to Chris Holden, Manager at AIS Training who is based on the HCF Catch site in Immingham. Chris spent a day putting the bespoke course together with advice from Ashley.

Chris stated "It was great to be able to work with Ashley on this project, we were only too happy to help. Hopefully this will lead to great things with potential new enquiries and local businesses working together."

## DONG ENERGY AND SIEMENS COMMENDATION

Ashley checked and signed off the course before it was presented to Jim Donkin at Dong Energy and Danny Mair from Siemens. Both parties were thrilled with the newly developed course and wasted no time in running it. Later that same week the course ran for two full days at the AIS facilities. "Ashley turned it round very quickly, we were very impressed." Jim enthused.



Chris Holden (left), Ashley Wright (right)

## FUTURE

A total of 12 technicians have completed the course, and Ashley has had enquiries from Siemens at Lincs Windfarm regarding the course. Now that Hammond and Taylor have this course which is specific to some of their products, it could be something they expand on further whilst working with Chris at AIS to plan and carry out the course.

Hammond & Taylor



# Is your business ready for the apprenticeship levy?

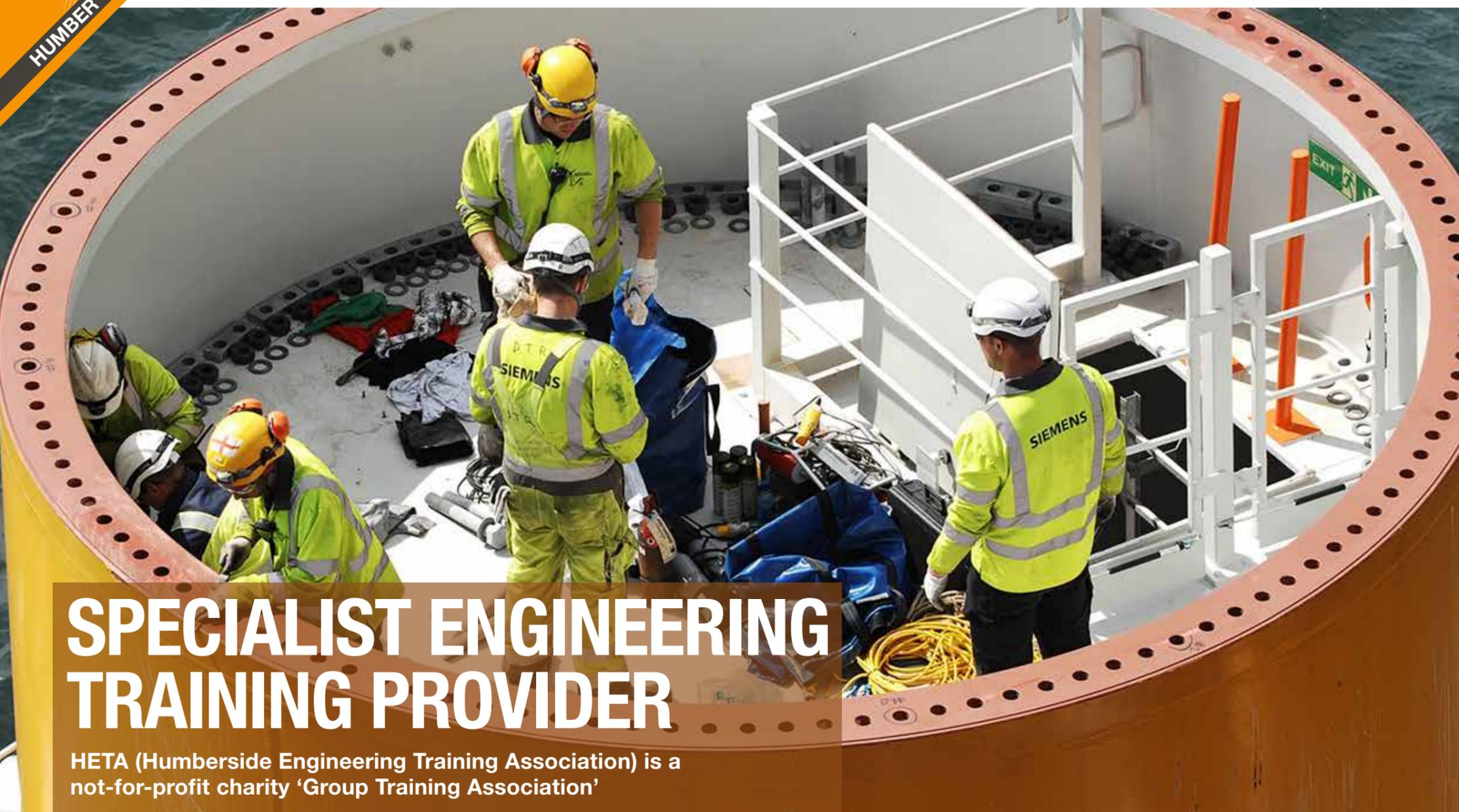
With the Apprenticeship Levy coming into effect in May 2017 many employers are still unclear.

HCUK Training can help you get the most out of your 'Levy' contribution.

Contact Jo Hepi, visit [www.hcuktraining.co.uk](http://www.hcuktraining.co.uk) or call 0300 330 2010

@hcuk\_training | HCUKTraining | hcuk-training





# SPECIALIST ENGINEERING TRAINING PROVIDER

HETA (Humbly Engineering Training Association) is a not-for-profit charity 'Group Training Association'

Established in 1967 by a group of local companies to bridge the gap between industry and education. HETA is renowned as the leading engineering training provider in the region.

The company's expertise centres on an ability to understand the needs of a business and to be able to design and deliver a training solution to meet those needs.

### ASPECTS

There are essentially two aspects to the business...

- Upskilling of people already in the workforce
- Recruitment and training of apprentices who are about to enter the labour market

The current model of employer engagement and training delivery has value in selected international markets with particular emphasis on working with existing local partners to deliver training and provide technical expertise on capacity building projects.

### ADVANCED APPRENTICESHIP SCHEME

Advanced Apprenticeships, delivery is a key part of the UK's drive to raise the standard of skills in young people. HETA offer a fully managed Advanced Apprenticeship Scheme for a large client base ranging across a number of industry sectors including chemicals, ports, power generation and distribution, renewables, oil & gas, manufacturing, good production and many more.

### INDUSTRY COMPETENT STANDARDS

The training company provide skilled engineering technicians qualified to industry competent standard through apprenticeships in the following routes...

- Electrical Maintenance
- Mechanical Maintenance
- Instrumentation
- Fabrication & Welding
- Renewable Energy

Their candidates have to undertake a rigorous recruitment process in order to be considered by HETA thus ensuring a quality outcome.

### UPSKILLING DEVELOPMENT

HETA also offers a variety of industry standard as well as bespoke courses designed to up-skill and retain existing members of staff which can be done in the UK or at an international site.

These include...

- Electrical training
- Mechanical training
- Instrumentation training
- Fabrication & welding training
- Health & Safety training

### HETA



## ...connecting markets

MPI Offshore's fleet of purpose-built offshore foundation and wind turbine installation vessels plus an experienced team make us a world leader in offshore wind installation.



## Exactly where you need us

MPI Workboats operate a fleet of high speed crew transfer and offshore workboats - designed to operate in the demanding environment for the Offshore Wind Industry.

+44 (0) 1642 742200  
info@uk.mpi-offshore.com  
www.mpi-offshore.com



# THE COMPLETE WIND TURBINE TRANSPORT SERVICE

## FROM PORT TO SITE

The 'Ports/Marine' Department is one aspect of WWL ALS' Services. The company acts as a vessel agent and also provide a regular full contracted supervisory service for several clients which includes...

- Ensuring RAMS & Test Certificates are all in place/correct prior to discharge of vessel
- Tool Box Talks signed off
- Checking slings etc prior discharge/handling
- H&S compliance during ops
- Cargo inspection/reporting

### MONITORING OF HANDLING PROCEDURES

The company provides 'on the go' monitoring of handling procedures to clients handling manuals during operation and produce handbook size manuals for clients, which are issued to stevedores, crane companies and others, as well as reference copies which each of the company team members hold for use during operations.

### MARINE WARRANTY & CARGO SURVEYOR

WWL ALS employ an independent Marine Warranty & Cargo Surveyor, who is a member of the International Institute of Marine Surveying with over 35 years, experience who can identify and recommend solutions to overcome those determined by the survey, on machines in shipment and quay storage all over the world.

He can carry out P+I work as well as cargo work for clients and insurance companies etc, and has been trained by a major wind turbine manufacturer, for example, to do fullcondition surveys of their components both at port & sites as well as being trained for working at height on windfarms.



### CLIENT SERVICE DETAIL

At the end of each vessel discharge, WWL ALS supply a full surface condition/out turn report for components.

For another client, the company is given access to their internal file sharing system, and the team upload all reports, photos and documentation directly to the project folders.

The company is currently handling over 20 projects in the UK & Ireland 2016 for one manufacturer and others on a case by case basis. They also provide/procure

the entire port operation from Ex Hold, via store to reloading to delivery vehicles and stock management and supervision of any work/repairs in port. The team often supply the trailers/mafis in port to keep accountability in one place.

### COMPLETE DOOR/DOOR SERVICE

WWL ALS offers a complete door/door service comprising of full co-ordination and management of all activities from manufacturers' works to delivered site foundations.

### SHIPPING/CHARTERING...

- Initial contact to discuss requirements, including budgets, time-scale and any special considerations
- Locate suitable port in exporting country & make initial enquiries to establish optimum port at destination in conjunction with a suitable route to site
- Establish most cost effective method of shipment i.e. geared or gearless tonnage framed or crated shipment mounted or dismantled segments
- Co-ordinate between ship and barge owners and manufacturers to ensure the optimum stowage arrangement is achieved on board the ship
- Arrange for marine survey of cargo if required and full attendance to loading and discharging
- Loading of vessel under full WWL ALS supervision, keeping all parties informed of progress throughout

### SITE MANAGEMENT...

- Attend site meetings with manufacturer and their client to establish working practice and required delivery schedule
- Compile full H&SE compliant risk assessment and method statement for submission to the client and all operating parties
- Agree sequence to achieve timely discharge from vessel to quay and to delivery transport
- Co-ordinate deliveries to site in accordance with the site erection requirements
- Maintain site delivery record
- Provide clients with a total debrief and report

### DELIVERY COORDINATION...

- Organise and conduct a trial run from discharge port to site foundation, based on component dimensions and trailer configurations
- Liaise with statutory authorities who need to be informed of any movements e.g. arranging for street furniture removal carriageway modifications and authorisations
- Liaise with police forces and local authorities along the routes arranging all necessary movement permits and escort arrangements
- Appoint port/terminal operator, crane contractor, and haulage contractor
- Discharge of vessel under full WWL ALS supervision, keeping all parties informed of progress throughout

### ONE STOP SOLUTION

WWL ALS provides a one stop solution to transport requirements from point of manufacture to final destination!

### SPECIALIST SERVICES

Over the years, WWL ALS has gained an enormous amount of experience in all the specialist services that are required to move large and heavy loads. Permit control, route planning, police escorts, the use of pilot cars, attendants and statutory movement orders are all areas of in-house expertise.

“ THE COMPANY IS CURRENTLY HANDLING OVER 20 PROJECTS IN THE UK & IRELAND 2016 FOR ONE MANUFACTURER AND OTHERS ON A CASE BY CASE BASIS ”

### MOVEMENT PERMITS

With the UK classification of 'Abnormal' changing to meet the demands of the industry, keeping up with legislation and the requirements of local police forces, you need the services of a specialist who understands the difficulties. The team at WWL ALS will advise on all aspects of the necessary legal and statutory notification process then go on to manage the process.

The company employs an in-house escort car/supervisor who is also slinger banksman qualified, who oversees escort services.

In addition, the company is registered on ESDAL for movement permits, and provides a permit service for overseas hauliers delivering or collecting cargo in UK.

### ROUTE PLANNING

Route planning is critical to the success of all abnormal load movements, it is the most visible and often most dangerous point of the operation. If not planned correctly it can lead to major losses or legal action. Depending upon the load

itself and the preferred route, it may be necessary to inform local police forces, authorities, county councils and many other interested parties such as Railtrack or British Waterways.

The company conducts all liaison for the load and action any advice or demands these authorities may require. They will plan the route and make arrangements with all relevant authorities, to ensure a speedy and effective movement.

### POLICE ESCORTS

Every police force in the United Kingdom will have a different policy towards the necessity for a proper police escort. Such escorts will require at least two days notification prior to the date of movement, which does not include weekends or bank holidays. WWL ALS will liaise between the different police authorities and arrange a schedule of police escorts, designed to complement your loads.

### PILOT CARS/SECOND DRIVERS

The nature of the load may necessitate the use of pilot cars in support of police escorts, or equally the need for second drivers to undertake any manoeuvres en-route. Again each authority may insist upon a different level of movement support and the company can provide a full support service that fulfils all current movement legislation.

### STATUTORY MOVEMENT ORDERS

Loads exceeding 5.00 metres in width will require a VR1 movement order issued by the Highways Agency (formerly the Department of Transport in London). Loads with larger dimensions may require a special movement order and official approval. WWL ALS can advise on all documentation for both the United Kingdom and Continental Europe and provide the entire liaison, support and supervision necessary. Should the removal of street furniture or obstructions be needed, the company can also oblige.

### WWL ALS





# SLIPWAY INVESTMENT FOR GRIMSBY

Grimsby Shipyard Services Ltd (GSS) is a £1.85m investment into the refurbishment of the existing slipway. It is significant that this project was supported by North East Lincolnshire Council who facilitated a 50% grant.

Both Port of Grimsby east and GSS are subsidiaries of Grimsby Fish Dock Enterprises Ltd who manage and operate the Port.

The slipway has been totally restructured and the centre piece of the investment is the new 200t vessel hoist. The original slipways were incredibly well built and engineered around 1930 specifically to cater for the developing fishing trawler fleet.

With recent changes in the composition of vessels in dock from trawlers to offshore renewable, concerns over the longevity of the existing slipway facility and demands to keep pace with the requirements of modern vessels, it was decided by GFDE Ltd to invest into a new facility.

## SUPPORT

The existing companies in and around the slipway and NELC were all supportive of the idea so the project was started. Clearly the offshore renewable sector is well established in Grimsby which GFDE pioneered back in 2007. Both ports in Grimsby service offshore wind vessels and the Humber itself is probably the major hub in the UK.

## INDUSTRY FLEXIBILITY

Grimsby, for years has been synonymous with fish and still have Grimsby Fish Market, itself still thriving. However, there is more than enough room for offshore crew transfer vessels and support vessels enabling the provision of compatible facilities for both sectors.

## FUTURE FOCUS

Martyn Boyers, CEO of GFDE commented: *"This is an investment into the future of the Port of Grimsby east and coincides perfectly with the expectation of more vessels. The Siemens development in Hull, the existing offshore activity in Port of Grimsby east and the recent announcements from Dong Energy with ABP in Grimsby, all underline the potential we have as an area."*

*"This investment is good for us, good for our Council and supports the community. It is a real opportunity for doing business."*

**Grimsby Shipyard Services Ltd**

# SUPPORTING OUR CUSTOMERS SUPPORTING OUR FUTURE

Fifty percent of UK offshore wind production is supported by our extensive network of ports and know-how.

We look forward to continuing the journey with you.

Hull  
Goole  
Immingham

Grimsby  
King's Lynn  
Lowestoft

Ipswich  
Southampton  
Teignmouth

Plymouth  
Newport  
Cardiff

Barry  
Swansea  
Port Talbot

Garston  
Fleetwood  
Barrow

Silloth  
Ayr  
Troon

**ABP** | ASSOCIATED  
BRITISH PORTS  
[www.abports.co.uk](http://www.abports.co.uk)

**HUGHES**  
SUB SURFACE ENGINEERING

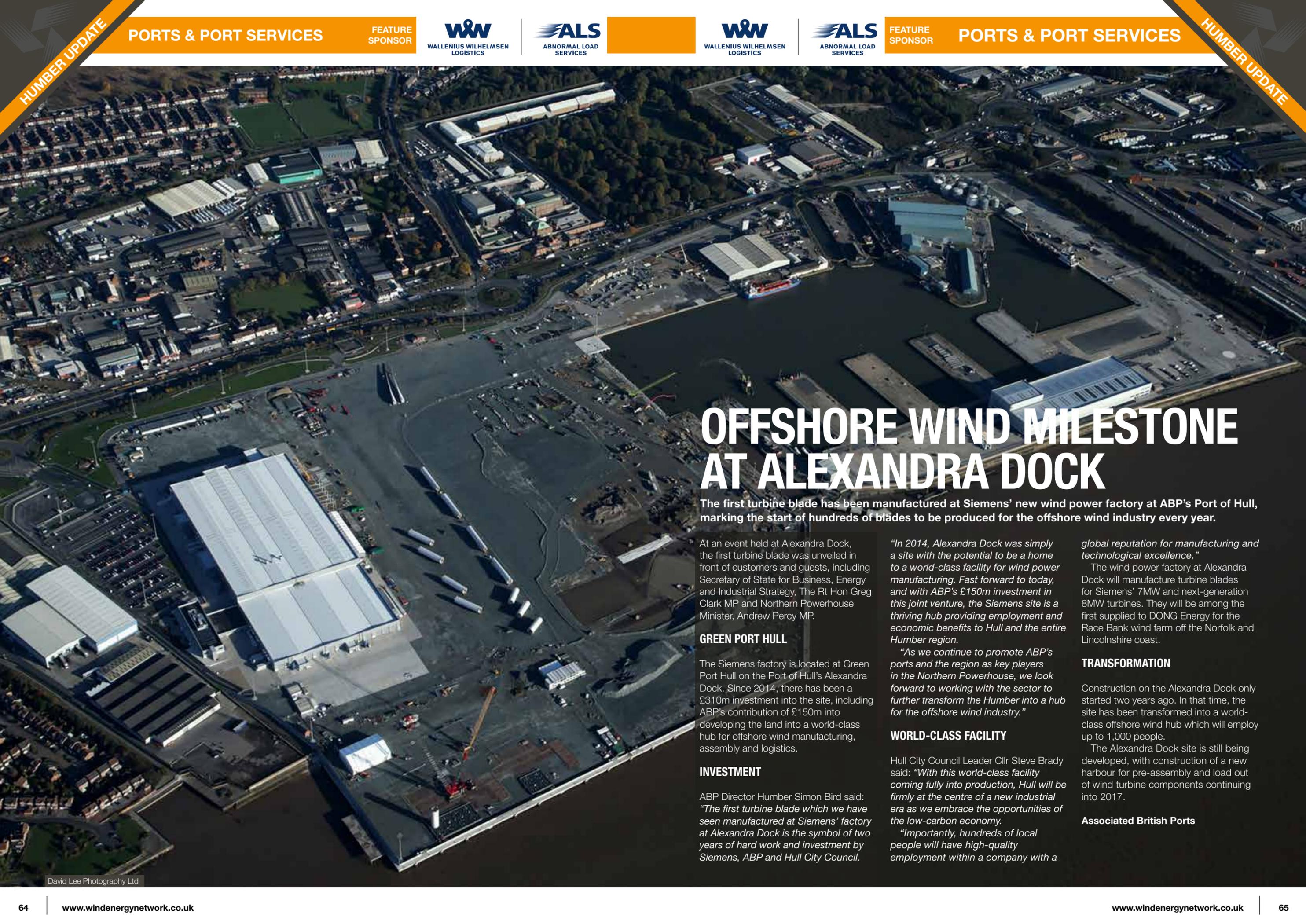
**TOWER & CABLE SUPPORT TEAMS**  
Hughes SSE have extensive experience working on complex offshore projects across Europe in both the Offshore Renewable and Oil & Gas Sectors.

**TOWER AND CABLE SUPPORT**  
Pre-Rigging of Pull-In Equipment  
Installation Of Messenger Wires  
Cable Pull-In Teams and Equipment  
Hang Off and Cable Stripping  
De-Rigging of Pull-In Equipment

**SHORE END AND CABLE BEACH PULL IN'S**  
Hughes SSE have developed a strategic partnership to offer a turnkey solution to shore end and export cable beach pull in operations to include:  
Shallow Water Cable Burial Personnel and Equipment  
Specialist Equipment, Winches, Excavators, Rollers and Cable Floats Cable Protection

For further information visit [www.hsse.co.uk](http://www.hsse.co.uk), or call +44(0)151 922 2023 / email [info@hsse.co.uk](mailto:info@hsse.co.uk)

**MCA** **irata** **UK MEMBER** **PPAL Verify** **UVDB Verify** **ISO 9001 CERTIFICATION** **GOLD AWARD**



# OFFSHORE WIND MILESTONE AT ALEXANDRA DOCK

The first turbine blade has been manufactured at Siemens' new wind power factory at ABP's Port of Hull, marking the start of hundreds of blades to be produced for the offshore wind industry every year.

At an event held at Alexandra Dock, the first turbine blade was unveiled in front of customers and guests, including Secretary of State for Business, Energy and Industrial Strategy, The Rt Hon Greg Clark MP and Northern Powerhouse Minister, Andrew Percy MP.

## GREEN PORT HULL

The Siemens factory is located at Green Port Hull on the Port of Hull's Alexandra Dock. Since 2014, there has been a £310m investment into the site, including ABP's contribution of £150m into developing the land into a world-class hub for offshore wind manufacturing, assembly and logistics.

## INVESTMENT

ABP Director Humber Simon Bird said: "The first turbine blade which we have seen manufactured at Siemens' factory at Alexandra Dock is the symbol of two years of hard work and investment by Siemens, ABP and Hull City Council.

*"In 2014, Alexandra Dock was simply a site with the potential to be a home to a world-class facility for wind power manufacturing. Fast forward to today, and with ABP's £150m investment in this joint venture, the Siemens site is a thriving hub providing employment and economic benefits to Hull and the entire Humber region.*

*"As we continue to promote ABP's ports and the region as key players in the Northern Powerhouse, we look forward to working with the sector to further transform the Humber into a hub for the offshore wind industry."*

## WORLD-CLASS FACILITY

Hull City Council Leader Cllr Steve Brady said: "With this world-class facility coming fully into production, Hull will be firmly at the centre of a new industrial era as we embrace the opportunities of the low-carbon economy.

*"Importantly, hundreds of local people will have high-quality employment within a company with a*

*global reputation for manufacturing and technological excellence."*

The wind power factory at Alexandra Dock will manufacture turbine blades for Siemens' 7MW and next-generation 8MW turbines. They will be among the first supplied to DONG Energy for the Race Bank wind farm off the Norfolk and Lincolnshire coast.

## TRANSFORMATION

Construction on the Alexandra Dock only started two years ago. In that time, the site has been transformed into a world-class offshore wind hub which will employ up to 1,000 people.

The Alexandra Dock site is still being developed, with construction of a new harbour for pre-assembly and load out of wind turbine components continuing into 2017.

## Associated British Ports



HUMBER UPDATE

HUMBER UPDATE

# QUALITY SUPPORT FOR OPERATIONS & MAINTENANCE

We introduce Boston Energy, our sponsor for this feature who are dedicated to the delivery of commercial energy solutions using renewables. Adrian Yeaman, Operations Manager takes up the story...

## OVERVIEW

Boston Energy is a division of Bostonair, who with the parent group supply engineers to the aviation and turbine maintenance industries.

From the beginning, personnel from our highly skilled aviation based workforce were selected and trained to Siemens for the O&M activities associated with wind turbines. This gave Boston Energy the ability to support Operations and Maintenance with quality engineering support from the onset and has proved a great success at site level support.

## CROSS SKILLING

The vision of cross-skilling gave Boston Energy the flexibility to respond to the increasingly competitive and dynamic market in which our customers operate.

Boston Energy's services to the energy industry span multiple areas...

- Recruitment and temporary labour services to meet workflow peaks
- Reskilling/cross-skilling of engineers through client approved technical training courses and to GWO standards
- Maintenance - applying practices from airline O&M to windfarm O&M
- Turnkey construction projects onshore and support to our renewables division for solar PV projects
- V164 pre-assembly with MVOW and 6MW pre-assembly with Siemens
- Managed service contracts onshore including troubleshooting
- Independent inspection and service including testing, repairs and certification of...
  - Lifting equipment; service crane, winches, hoists & rope lift equipment
  - Eye/anchor bolt inspection, fall arrest/man safe system inspection, fall arrest system inspection & certification (planned ongoing)
  - Man riding lifting equipment (planned ongoing)

## RECRUITMENT

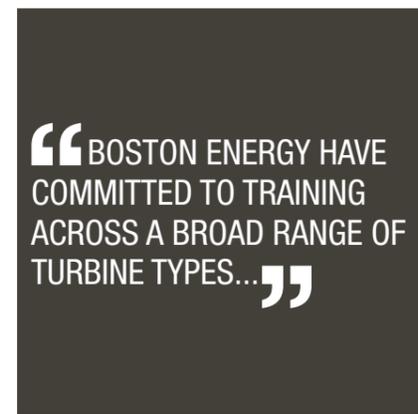
The company recruit and train candidates from mechanical and electrical backgrounds. These can be drawn from heavy or light mechanical, commercial electrical, military engineering, aeronautical or other heavy mechanical industries. We believe this broad approach brings a wide range of skills, experience, maturity, flexibility and a 'can-do' attitude that identifies Boston Energy as delivering services at a level to exceed expectations.

With a continuous improvement focus Boston Energy have committed to training across a broad range of turbine types, developing core service competencies and working towards involvement in construction roles.

Within the last 18 months, the company has taken over service managed O+M contracts for UK onshore WTG assets and delivered a broad range of service and troubleshooting support, assisting our European client with the implementation of UK legislative training courses and Health and Safety protocols for use by their staff when working in the UK.

## THINKING AHEAD

This ability to think around the corner has seen not just a client and supplier service agreement – but the development of a trusting partnership with a mutual goal of safety, excellence and maximum renewable generation.



## RECRUITMENT STRATEGIES

Good recruitment strategies can mean the difference to short term or long term staff retention. Placing technicians close to home provides continuity, flexibility and a reassurance from our clients that along with their principle of delivering back into the local community, we value and work towards the same goals. We train extensively bringing new opportunities and exciting new careers to engineers from all walks of life. We value the lifeblood of our business – our technicians – and we are able to see them not just as employees, but as family providers and dedicated people.

## HEALTH AND SAFETY

As a people business, understanding is key to a safe working environment and successful output. Boston Energy are committed at every level in the business to understand, communicate and deliver to client expectations.

A successful example of co-operation and enhanced service delivery was when we asked a client what would improve their day to day operations, both in terms of safety, output and economy. Supervision was seen as the crux of the problem, with valuable resources being detailed to support technicians who could not work autonomously due to lack of internal approvals.

## WORKING TOGETHER

Boston Energy worked with this customer to determine the processes needed, additional training and how to involve the technicians, ultimately achieving the competency approval and a reduction at site level of supervisors required. This net effect allowed the customer to re-distribute key figures to other critical tasks and save cost on planned manpower budgets per site. The success of this approval procedure showed that we could deliver technicians at a higher level, at speed and to good cost, gaining additional roles as a direct result of our proactive approach to the problems.

## HMF CRANES – NOW PART OF BOSTON ENERGY

HMF Cranes has been operational in the wind industry for over 10 years, focusing on the supply, installation, service and inspection of wind turbine nacelle service cranes, lifting equipment and parts/consumables. They also have a dedicated training department, specialising in the supply of bespoke training, tailored for the wind industry.

The team currently inspect, service and maintain equipment in over 1800 wind turbines for many clients, across the full range of wind turbine manufacturers, both in offshore and onshore locations throughout Europe.

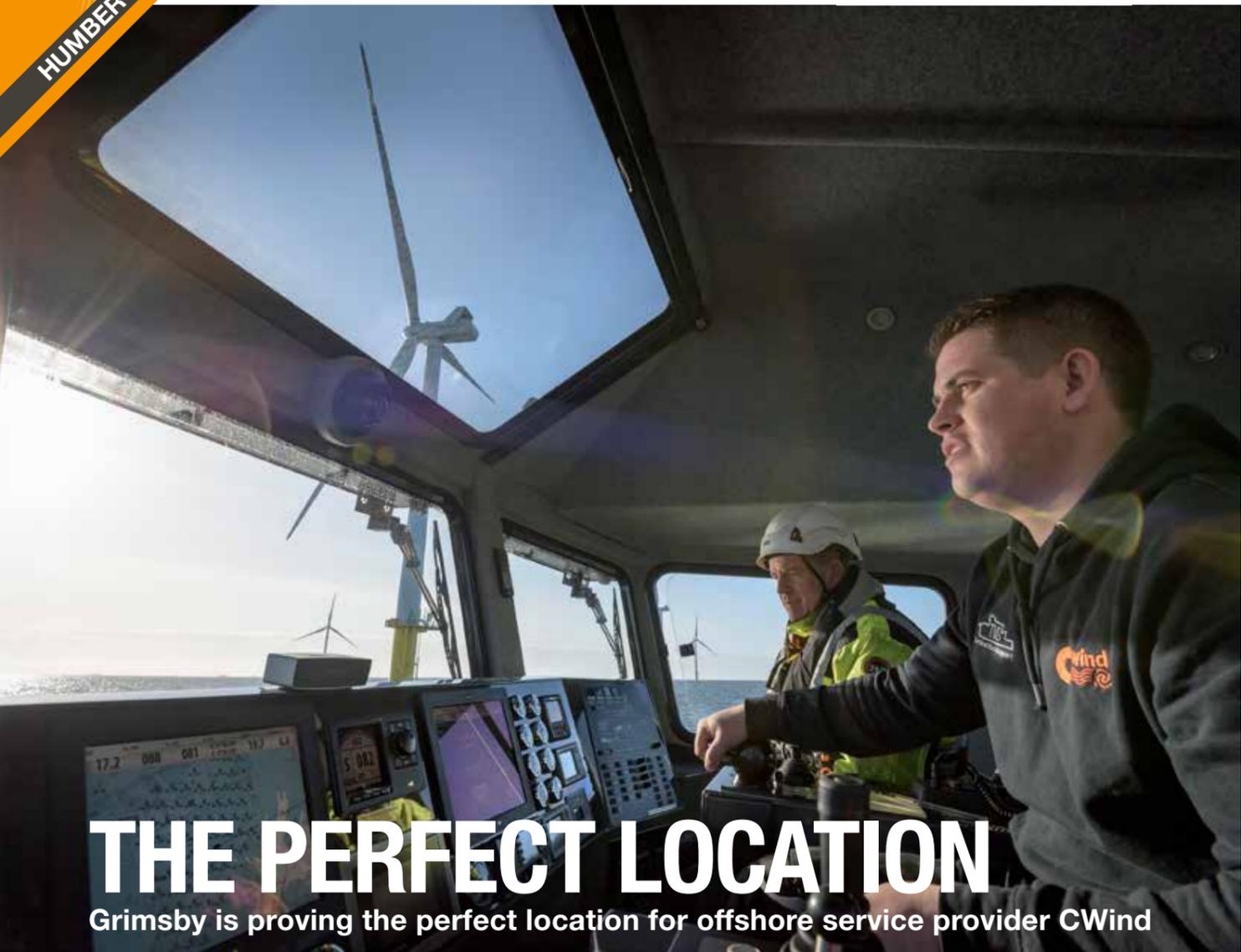
## STANDARDS

HMF engineers are fully certified to all European standards and are highly experienced including wind turbine 'authorised' technician status for turbine access, egress, take-over and handover procedures.

The engineers carry out regular inspection, service, maintenance and testing to ensure wind turbine equipment continues to operate safely and reliably, to safeguard minimum downtime and ensure clients' wind turbine equipment is always compliant and within international regulatory requirements.



**Adrian Yeaman**  
Operations Manager  
Boston Energy



# THE PERFECT LOCATION

Grimsby is proving the perfect location for offshore service provider CWind

## HUMBER BEGINNINGS

In 2014, the successful management of a CWind project in the Humber area required the establishment of a project office in Grimsby Fish Docks. What was then the company's first satellite office, consisting of a Project and a Site Manager in a temporary structure, has since turned into a major operational hub for CWind.

The company currently coordinates its services to nine offshore windfarms from its Grimsby office, employing around 150 contractors and staff. Large windfarms off the Humber coast, such as Humber Gateway, Lincs and Westernmost Rough are obviously a central focus for the team.

## MARINE CONTROL CENTRE GRIMSBY

Earlier in 2016 the company established its first marine control hub and now runs the vessel and fleet management for

several of its projects from its Grimsby premises. Stef Callis, General Manager (Grimsby) commented: *"This location is perfect for us. It has good access for our vessels and ample storage facilities which not only allows us to provide a wide range of offshore services, but will also support us with our future expansion plans."*

The most high-profile of the services CWind provides from Grimsby is no doubt the 20-year Operations and Maintenance (O&M) contract for the Westernmost Rough OFTO (Transmission Capital), which was awarded earlier this year. Under this contract, the company provides the full range of O&M services for the offshore and onshore substations. Since its acquisition by Global Marine earlier this year, the company now has access to larger vessels, such that it can also add a range of cable repair services.

## REACHING ACROSS THE CHANNEL

When it comes to operations, there aren't many service projects the staff at their Grimsby office aren't involved. While the company is putting plans in place to expand its local operational capabilities in Germany, it's worth noting that the majority of these projects are currently run from the Grimsby office.

With the expected increase in construction and O & M services over the next few years, the focus for CWind in Grimsby is clear... local solutions, with local staff for local projects – based on experience gained Europe wide.

## CWind

# REDUCING THE COST OF O&M

Rotos 360 was established in 2013 to exploit the technology development through a UK Government funded research project.

The aim of this research was to reduce the cost of operation and maintenance on offshore wind turbines. As a result a large gap was identified in the O&M field where expertise could be utilised across the industry, offering customers the opportunity to make great savings in lost turbine down time as well as protecting their assets for years to come.

Rotos 360 uses the latest technological innovation to provide solutions in the inspection, repair and reconditioning of rotor blades in both onshore and offshore environments.

The company has successfully completed projects throughout the UK and Europe, in both onshore and offshore environments using the Rotos 360 UV repair process, which was awarded DNV GL Certification in 2014.

## REPAIR PROCESS

This method significantly reduces the amount of time needed for curing a repair, enabling many more repairs to be carried out in comparison with a standard wet lay-up system across a set timescale.

It also gives customers the option to have their technician carry out repairs on a 24 hour basis, further reducing time off line.

## SYSTEM DETAIL...

- Working Temperatures – can be between 5 to 30 degrees centigrade
- Fast Curing – up to 25 times faster than Epoxy curing
- Clean Materials – no toxic vapour emitted during curing

## CUTTING EDGE TECHNOLOGY

With the company's new blade bubble and leading edge armour (patents pending) coming to the market, along with their world leading UV repair system, Rotos 360 is continuing to introduce cutting edge technology to the wind industry to bring down customer's O&M costs.



## WORKFORCE

The workforce is at the heart of the company. From the management team through to the technicians on the ground, they value each individual's efforts in building the company. All of their expertly trained teams are managed by a properly trained Supervisor with extensive industry experience.

Rotos 360 prides itself in their ability to provide quality management systems in cooperation with the needs of clients and are also committed to offering the best working environment and conditions for employees. The company

endeavours to emphasise that they are the most important part of the company and in return they have a dedicated workforce offering the highest levels of service and quality.

## Rotos 360

SCAN/CLICK

MORE INFO

SCAN/CLICK

BROCHURE

SCAN/CLICK

PLAY VIDEO



# GLOBAL LEADER IN PROVIDING SPECIALIST PERSONNEL

Specialist Marine Consultants Ltd (SMC) is a global leader in providing specialist personnel to the Offshore Renewable Energy industry. Based on the North Yorkshire coast, SMC are ideally placed to supply their expertise to the Humber region.



Their work along the East Coast includes providing Dong Energy with load out coordination of Monopiles and transition pieces at Race Bank (presently under construction), as well as cable installation Client Reps. In 2014/15 they provided deck supervision for the installation of MHIVestas WTG's at Humber Gateway, and Client Reps for the Westernmost Rough WTG installation.

### SUCCESSFUL WORKING RELATIONSHIPS

The company have also supplied site supervision to Yorkshire Water with the installation of a 1.2 km outfall pipe, as part of a £40 million investment to improve water quality at Bridlington's beaches, and personnel at Teesside and Blyth windfarms.

They enjoy a long and successful working relationship with Siemens Windpower, one of the key investors at Green Port Hull, having provided Marine Coordination for them on numerous UK offshore windfarms since 2012. Siemens' investment in a new wind turbine production facility in Hull has made them a major employer in the region.

### DRIVING DOWN COSTS

The rate of change in offshore windfarm construction is rapid. With sites being built further from shore, there is an industry-wide emphasis on driving down costs without compromising on health and safety. Consequently, marine coordination has never been so important as a means to control costs and ensure efficiency.

Good marine coordination provides 24-7 logistical planning, operation and management of the personnel on the project. For example, SMC utilise a taxi system for crew transfer vessels, which minimises fuel costs and reduces transfer times, thereby increasing uptime on the WTG.

SMC's relationship with Siemens was pivotal in the shaping of SMC's ATLAS marine coordination system, which was honed through daily use on Siemens projects. SMC now offer the system as part of their marine coordination service to all clients. The ATLAS system provides essential reports and real-time data, tracking all personnel and vessel movements.

“THE RATE OF CHANGE IN OFFSHORE WINDFARM CONSTRUCTION IS RAPID.”

### O&M TECHNICIANS

Looking to the future, the company has added Turbine Technicians to their portfolio of skilled personnel. As more windfarms become fully commissioned, the requirement for experienced local technicians will grow. This strengthens the company's service offering to the growing offshore energy industry in the Humber region.

Specialist Marine Consultants Ltd





# PROVIDING ONE-STOP-SHOP EXPERTISE

The company performs inspection and service on turbine mounted safety equipment (TMSE), including lifts, cranes and pressure systems etc. within the WTGs and have strategic partnerships with key manufacturers of assets requiring this level of maintenance which allows them to have the expertise in the works and also perform repairs without the need for a re-visit.

## ONE-STOP-SHOP

This scope is truly the 'one stop shop' and the company's experience in this is significant with many customers and windfarms onshore and offshore across Europe satisfied with their engineers diligence and eagerness to leave the turbine in a fit state for the blades to continue turning but knowing compliance is assured with the assets they have inspected.

## OEM RELATIONSHIPS

Over the last 10 years Skyform has proven to be the recognised industry leader on wind turbines man-riding equipment/ towerhoists and provides commissioning, service and maintenance works on these for all the main manufacturers. Their relationship with the OEMs of these assets remains strong and they take comfort in the knowledge that experts are servicing their products to assure industry of the reliability of the product.

## REAL WORLD TESTIMONIAL

Skyform have been performing the 'one-stop-shop' scope with Centrica at Lynn and Inner Dowsing Windfarm

for over two years now and the client is delighted that they no longer have to rely on multiple organisations working multiple shift patterns engaging with multiple key contacts to perform the varying inspection works required under LOLER/ PUWER/PSSR etc.

With Skyform Wind that headache has been removed and the team of engineers visit the WTG's with a strategy of works that ensures compliance and reliability. Centrica have noticed a significant cost reduction via this methodology and it is no coincidence that productivity levels at LID have increased dramatically over the last 2 years and the company takes some pleasure that the works they perform have in some way had a little impact on this increased output.

## SAFETY CULTURE

The team at site engage regularly with the excellent contractor safety culture embodied and they feel this approach is industry leading and also believe the ripple effect of it is now being felt elsewhere.

## BRIGHT FUTURE

The company continues to expand and their forecast for growth strategy remains strong for the coming years and beyond.

## Skyform Scotland Ltd



# CASE STUDY PROTOTYPE WIND TURBINE PROJECT

3sun Group, provider of products and services to the global energy industry, supported an innovative project in which they undertook operations and maintenance (O&M) services on a prototype wind turbine, following a previous successful commission and installation by their own personnel.

The Group has been providing services to the wind sector since 2008, and has grown to make renewable energy services a core focus, providing solutions for customers' assets from design and engineering through to installation, commissioning and maintenance.

“3SUN GROUP WAS A KEY SUPPLIER OF LABOUR AND ENGINEERING SUPPORT DURING THE CONSTRUCTION...”

## PRINCIPAL CONTRACTOR

The Group was the principal O&M contractor for the project and also provided a site based management team including Site Manager, Commissioning Manager, HSE Coordinator and Site Supervisors.

3sun Group provided a central contact for all documentation and information which was readily available for the client when necessary, and allowed the client to ensure its technicians performed operations safely and efficiently. The documentation provided by the client and subcontractors was also reviewed and authorised to ensure compliance with site procedures and a control and awareness of concurrent activities between all relevant parties.



## MANAGING UNPREDICTABLE CHALLENGES

Due to the nature of working with a prototype turbine, it was essential to ensure a robust, safe system of work was in place. The Group utilised the wealth of experience held by its technicians and on-site personnel to overcome unpredictable challenges that arise from new, innovative technology.

3sun Group was a key supplier of labour and engineering support during the construction phase and utilised the same personnel for the commissioning and operational phases, which retained valuable asset knowledge. The Group also supplied statutory inspection and certification management services for its specialist PPE, tooling and lifting equipment required for the project.

## SUCCESSFUL COMPLETION

The O&M of the prototype turbine was successfully completed with the support and expert service capabilities of the Group.

## 3sun Group



Skyform Wind are experts in Statutory Inspection for many OEM's in respect to TMSE, Lifts and Cranes etc.

**Our works takes us across Europe satisfying compliance with more than 2000 WTG's.**



**Statutory Inspection, Blade Inspection and Repairs.**

Fully trained.  
Fully accredited.



[www.skyformwind.co.uk](http://www.skyformwind.co.uk)

# TAILORED, SERVICED ACCOMMODATION

## Solutions for the corporate market

Eazy Rooms was established early 2015 to provide quality serviced accommodation solutions tailored to their clients' needs and they have grown to becoming the 'go to' provider for corporate accommodation requirements due to their increasing list of blue chip clients and reputation for great service. Having identified a gap in the corporate let market, the company created solutions for large corporates, contractors, apprentices, training providers and management alike.

### FLEXIBILITY

From one night stays to short term and longer term rentals, their 'Home from Home' approach ensures every one of their guests experience a welcoming and homely environment. Corporate accommodation solutions are their specialty and pride themselves on customer service & building long lasting relationships. The company works hard to offer a flexible and manageable experience for both corporate clients and their valued staff. Eazy Rooms is the stress free solution to cover every need.

### SERVICES INCLUDE...

- Packages tailored to budget & needs
- High standard of accommodation including on site security & live in attendants
- All inclusive of bills including TV & Wi-Fi
- Hassle free & reliable
- Flexible housekeeping option
- Quality added extras including meals provision, on site chef, transport solutions and essential toiletries
- All live in attendants DBS checked
- Short or long term packages
- Last minute requirements catered for
- 24/7 maintenance service

### CASE STUDY 1 1 YEAR ROLLING CONTRACT

A large contractors for the Siemens project approached the company with a requirement for their full team to have quality, en-suite accommodation. They pride themselves on their company ethics and their staff, therefore they wanted to make sure they had the accommodation that reflected that. They didn't want to be based in B&B facilities, checking out every weekend and taking all their belongings to and fro.

Based on their brief, Eazy Rooms offered them a brand new development situated in Hull's Old Town. A beautiful restoration with high ceilings, original features and plenty of space with a super modern fit out. With 12 individual large en-suite bedrooms over 3 floors and a fully fitted out, well equipped spacious kitchen as well as a smaller, separate kitchen area, car parking and a large communal lounge, it fitted their needs completely. They loved it and took the whole building!

### LOCATIONS

Offering complete accommodation solutions across three sites based in or within close proximity to Hull city centre and set to expand into other areas very soon, increasing numbers of companies within the wind industry are choosing Eazy Rooms to accommodate their workforce.

### FACILITIES

Every room offered is created with client needs in mind. Therefore, a luxury en-suite is a must, along with TV in every room, large bed, hotel standard linen, superfast Wi-Fi, well equipped communal areas (some including pool table and on site gymnasium as well as superb outdoor facilities) and well thought out, fully equipped, modern kitchen facilities.

Many companies want to accommodate their staff together, rather than in separate houses or flats therefore teams are grouped together and the company has worked on a number of solutions where companies have taken multiple rooms, which works well.

Nikki Blowers, Director



### HYBRID SOLUTION

Solutions are the hybrid between staying in expensive hotels and renting out properties which can be full of hassle, time consuming and very pricey. All accommodation is fully inclusive of bills. Any extras are all agreed, sourced and arranged in advance which means one bill, each month with no hidden extras.



### CASE STUDY 2 11 MONTH ROLLING CONTRACT & 18 WEEK ROLLING CONTRACT – BOTH IN THEIR 2ND YEAR

The company looks after a number of younger apprentices through their partnership with HETA and now have regular clients with two large companies in particular with 17 guys in total.

As part of their package they offer chef cooked breakfasts as well as a packed lunch made fresh each morning. Their guys head off over the Humber Bridge and arranged transport services collect them at 7.15 a.m. prompt each weekday and collect them at 4pm prompt to return back to Eazy Rooms where they can relax and play pool, head to their rooms which have been cleaned and serviced each day or even take to the gym before dinner.

The chef is on site to prepare two course dinner, fresh each evening which includes drinks. The company prides itself on using the best quality, locally sourced ingredients and create the evening meal menus to the groups' dietary requirements and their preferences.

### EVERY DETAIL COVERED

The house has everything included – pots, pans, crockery, cutlery, dishwasher, wine cooler, multiple fridge freezers and cooking facilities, large eating area, private rooms with TV's and a super large flat screen TV with SKY and a pool/table tennis table in the main lounge.

The company asked for a cooked breakfast package as the guys started

early, so an Eazy Rooms chef attends the house every weekday morning to rustle up hot breakfasts of their choice and lays out the cereal, toast, coffee, juices etc. Anything they need! And all then cleared away and cleaned for their arrival home that night.

The weekly servicing package cleans through all the rooms and changes linen, towels and replaces all bathroom essentials as well as a thorough clean of the communal areas.

The feedback has been incredible. The superb price certainly does not reflect the package and the level of service offered. The company remain on call for any additional needs or any issues that may arise and are taking on more staff to create the right solution to fit client timescales.

### MAKING A DIFFERENCE

Eazy Rooms really can make a great difference to the time spent in Hull. The company wants to enhance the experience clients and their staff have by providing quality accommodation at affordable rates and really aiming to exceed a client's expectations in terms of value for money.

They strive to work with companies to maximise your profitability in providing excellent accommodation solutions without blowing the budget.

### Eazy Rooms





# PRIME LOCATION ON THE HUMBER

With one of the most enviable postcodes on the Humber bank, The Ashbourne Hotel really is in a prime location for business travellers in the area.

Close enough to the key players located on the river Humber, yet set in a picturesque village location, it provides a haven of tranquillity for short or long term residential stays, with all the home comforts one expects to miss out on whilst working away.

All this and no long commute in the morning makes for an enjoyable experience away from home.

## INDUSTRY FOCUS

This is why at most times at The Ashbourne, with a large contingent from the wind energy and petrochemical sectors there will always be someone to chat with at the bar. The hotel also runs a lot of Able UK's conferences as

well as hosting various business events and planning hearings, the hotel is well attuned to the business needs of the large corporate firms.

## FLEXIBLE ACCOMMODATION

However, scratch the surface, and you quickly realise the hotel is anything but a large, faceless hotel. With a close knit team on hand to cater to your every whim, from flexibility on check in and check out times as well as breakfast arrangements for those on early schedules (for those that can't be tempted to stay for the hearty, freshly cooked options!) to providing packed lunches, right down to remembering your favourite dish on the menu.

The team go above and beyond to make their guests feel welcome; the high level of repeat business is testament to this.

## FACILITIES

For food lovers too, you're in for a treat, with the Ashbourne's kitchen team constantly striving to provide fresh, locally produced dishes to suit all tastes.

The Ashbourne is no stranger to the European travellers either; with all rooms containing at least one European electrical socket due to the large Danish contingent, as well as free wifi throughout the hotel, and free car parking – you will have access to all the modern conveniences required during your stay.

## Ashbourne Hotel



# PROVIDING SUSTAINABLE LEGAL SOLUTIONS

Wilkin Chapman Solicitors established their specialist renewable energy division in 2011 to meet the growing regional demand for renewable energy related services.

The firm has a number of its branches located in the Humber region which has become a specialist hub for the offshore renewable sector.

## INDUSTRY EXPERIENCE

Since this time the division has grown to a team of ten multi-disciplinary specialists from agriculture, corporate, construction and commercial property departments who have accumulated a wealth of experience and knowledge, and have a proven track record of realised renewable energy projects. Wind related projects have played a significant part in the development of the division.

Support to the onshore wind energy sector includes providing advice on all legal aspects relating to the purchase, installation, financing and re-financing of commercial wind turbines. The firm has advised on over 60 onshore windfarm projects ranging from single turbines through to multi-landowner projects of 15-40 megawatts.



Richard Frogson

generate electricity to supply 800,000 average UK homes per year.

The offshore cabling is being dealt with by The Crown Estate granting the developers a time limited lease of the sea bed. However, the project also proposes to lay electrical cables onshore in a circa 60km long 60m wide easement strip across Lincolnshire.

A project on this scale affects significant numbers of landowners and Wilkin Chapman were instructed to provide advice on a variety of legal issues arising out of the proposed easement and construction works. These issues related to property, environmental, planning, agricultural occupancy structures, reinstatement of drainage systems, subsidy payments paid to farmers under the Common Agricultural Policy, access terms for carrying out surveys and disturbance claims.

## COMMUNICATION

Commenting on the project, Head of Renewables, Richard Frogson said, "One of the main challenges for the firm has been producing a co-ordinated

response to the proposals from multiple landowners. In this we worked jointly with the NFU and the Lincolnshire Association of Agricultural Valuers to ensure that landowners' interests were heard at each stage of the project."

## IN-DEPTH UNDERSTANDING

The firm has also been involved in acting for multiple landowners and tenants in relation to other nationally significant offshore wind energy projects including Smartwind, Hornsea Project One, Hornsea Project Two and the Humber Gateway.

Wilkin Chapman has an in depth understanding of the requirements from the perspective of landowners, developers, investors or suppliers and are able to respond to evolving legislation.

## Wilkin Chapman Solicitors

# SeaPlanner

# Reduce costs Minimise risk Improve efficiency

Leading marine management and monitoring system, SeaPlanner effectively integrates project information to optimise safety and efficiency.

- PERSONNEL MANAGEMENT ▪ TRACKING & SURVEILLANCE
- MARINE COORDINATION ▪ COMMUNICATIONS
- HSE ▪ ASSET RISK MANAGEMENT



+44 (0)1243 816 606 ▪ info@searoc.com ▪ www.searoc.com

“THE FIRM HAS ADVISED ON OVER 60 ONSHORE WINDFARM PROJECTS...”

## OFFSHORE WIND – CASE STUDY

In relation to offshore wind projects, the firm has recently advised multiple significant landowners in relation to the onshore cabling proposed for the Triton Knoll windfarm which is being constructed 20 miles off the coast of Lincolnshire. The windfarm could



# BREAKING INTO THE OFFSHORE WIND MARKET

A new report from NSRI (National Subsea Research Initiative) has identified operations & maintenance (O&M) – particularly inspection, repair and maintenance (IRM) activities – as the highest potential area for subsea companies to diversify into offshore wind.



Gordon Drummond

Titled 'Subsea Technological Challenges in Offshore Wind', the report highlights opportunities the offshore wind industry holds for UK subsea companies, with a technology roadmap outlining the way ahead with industry-driven objectives.

## ENCOURAGING DIVERSIFICATION

With global offshore wind expenditure forecast to reach £210 billion over the next ten years, NSRI and Offshore Renewable Energy (ORE) Catapult joined forces in a bid to encourage diversification.

The two organisations hosted an event recently to provide advice and support on market entry requirements, diversification strategies and the associated challenges.

The event also welcomed companies with experience in the offshore wind industry to provide an insight into the market challenges and barriers. These included a need to prove cost competitiveness or reduction and a proactive, innovative approach that does not dictate other industry methods.

## O&M REQUIREMENTS

Around 40 percent of the typical lifecycle costs of offshore windfarm developments come from O&M requirements. Based on UK Government projections for offshore wind deployment, the O&M costs for more than 5,500 turbines could be worth £2 billion per annum by 2025.

Given the UK industry's existing IRM capability, companies could break into the offshore wind market by offering individual services such as automated inspection, cable scour inspection, condition monitoring, remote monitoring, increased turbine access and risk based inspection. In time, these services could be bundled to deliver a full life-of-field offering. It's also believed that diverless solutions will

be of growing interest as offshore wind developments move further offshore into deeper waters.

## TECHNOLOGY ROADMAP

The ideas generated from the workshop have allowed NSRI to create a technology roadmap. These ideas have been grouped using an adopt, adapt, develop and collaborate principle, setting out the short, medium and long term activities that will help progress the development of subsea technology for widespread use in the offshore wind sector. The report also highlights opportunities for operators, developers, academia and the wider industry to work together to break down barriers and bring about positive change.

## EXCITING NEW BUSINESS OPPORTUNITIES

Commenting on the report, Dr Gordon Drummond, project director of NSRI said: "Offshore renewables is a growing market which presents exciting new business opportunities for the UK supply chain. While fossil fuels are expected to continue dominating the global energy supply mix, renewables are taking off at an incredible rate.

“THE OFFSHORE WIND INDUSTRY IS FOCUSED ON INNOVATING TO REDUCE COSTS...”

There are some natural synergies between the sectors, which provide a real advantage for subsea companies looking to expand their presence in multiple energy markets. "The offshore wind industry is focused on innovating to reduce costs, giving subsea companies the chance to introduce new technology and products to the industry. Diversifying into renewables provides greater resilience for companies and those who take an early lead will reap the benefits.

"The return on investment for renewable projects can be achieved significantly quicker than those in the oil and gas sector, representing a natural, highly profitable diversification strategy. We hope this report, along with the technology roadmaps will help guide companies through the steps required to break into the offshore wind industry, highlighting the entry routes and the opportunities most accessible to the UK supply chain."

## GRASPING THE OPPORTUNITY

Jamie McCallum, Project Engineer at NSRI, has been heavily involved in exploring the opportunities in offshore renewables for UK supply chain companies.

He said: "Companies experienced in ROV operations, subsea construction and IRM need to jump into action and adapt their offerings now if they are to meet the needs of the sector and drive long-term growth. The largest opportunity for the UK subsea supply chain is operations and maintenance.

"Europe is most definitely leading the way in offshore wind. However, China, Japan and the USA are growing markets, which present a host of opportunities for UK firms over the next five to 10 years."

## NSRI

The stock you need. Local to you. Delivered on time.

Available at your local Buck & Hickman branch. Call 08450 510 150 or shop now at [www.buckandhickman.com](http://www.buckandhickman.com)



Buck & Hickman



Humber Royal Hotel, Grimsby

## THE HUMBER ROYAL HOTEL

Here at the Humber Royal hotel we pride ourselves in a quality environment with exceptional customer service to each of our guests. With great bedrooms, bar and restaurant all with a comfortable and contemporary feel. 01472 240024 • [www.thehumberroyalhotel.co.uk](http://www.thehumberroyalhotel.co.uk)

Millfields Hotel much more than just a hotel



## MILLFIELDS HOTEL 53 Bargate, Grimsby, DN34 5AD

Millfields is a 27 ensuite bedroom hotel close to the retail and commercial centre of Grimsby. With a wide range of leisure facilities including a fully air conditioned gym, squash courts, sauna & steam room and an aromatherapist. Bargate 53 restaurant & brasserie and fully licenced bar. We are also the perfect setting for your meetings, conferences, weddings or special occasions. Millfields Hotel - much more than just a hotel. [millfieldshotel.co.uk](http://millfieldshotel.co.uk) | 01472 356 068 | [info@millfieldshotel.co.uk](mailto:info@millfieldshotel.co.uk)



# UNCOMPROMISING SAFETY AND COMFORT IN MULTI-PROTECTIVE WORKWEAR RANGE

MASCOT, a Danish company is one of the largest privately owned manufacturers of workwear in Europe. They supply workwear & safety footwear to the Humber and beyond. Their garments are sold into a multitude of industries from offshore windfarms to local DIY stores.

## PROTECTION, FUNCTION AND COMFORT

The company is focusing on users demands in their daily work, both the users in the Humber and the rest of Europe. Lately they have developed a new range, focusing on protection, function and comfort for users who have high demands for their workwear.

For many years, multi-protective clothing has almost exclusively been designed to protect the wearer against external elements such as arcs, sparks, etc., and it still has to do so. But, in this range of protective clothing more than just safety has been paramount in the development process. The internal comfort, ergonomic fit that allows a greater mobility, and functionality such as pockets, straps and adjustment options have also been brought into focus.

## TESTING BEFORE PRODUCTION

Optimally, workwear should be tested in the workplace before it is put in production and the company's MULTISAFE products are no exception. The result is a range thoroughly tested products with uncompromising safety, functionality and design.

"MASCOT's focus is to provide our customers with protective wear in which they not only feel safe, but also are able to forget that they are wearing. You rarely notice clothing when everything works. It supports the body's natural movements and holds the proper functions and well-placed pockets," states Sales Director UK and Ireland, Michael Tottman.

Industry-tested before production, it took more than 18 months to develop the range. One of the most time-consuming phases – but also the most important one – was the wearer trial period in which MASCOT's product development department sent workwear to work throughout Europe.

## ONSITE TESTING

Employees of utilities and of the gas, oil and electricity industries have tested the safety workwear in their daily work. Through the testing period, they have continually provided feedback and suggestions to eventual changes. For example, user suggestions led to an improved position of the ruler pocket that greatly influenced the overall comfort of the workwear. The test wearers were tired of their workwear having ruler pockets that were placed too far back on the leg, which meant they sat on their tools.

Another could feel the tools every time he would kneel or squat. The company had a long dialogue with the certification institute and found a solution that could not only comply with the certification demands, but also meet the criteria of the users, as the improvements considerably increased comfort during all movements.

## FLAME RETARDANT WORKWEAR

Flame retardant multi-protection workwear concurrent with the industry wearer trials, MASCOT's own laboratories were working feverishly to find the fabric that had just the right combination of properties. "More than 40 different types of fabric were tested for everything from



shrinkage to wear resistance and tensile strength" added Michael and stressed that the right fabric benefits the wearers.

The company is using a 100% 'inherent' fabric, where it is the fibres the fabric is made of that contain the flame retardant properties. This means that the flame retardant properties do not fade after repeated washing. This can be the case with products where the flame retardant properties are applied to the surface.

More people choose multi-protective workwear. It is not everyone that needs certified anti-static, acid resistant and flame retardant workwear that also protects against arc and occasional welding. But, more and more industries are becoming aware of how the proper workwear can reduce the risks of certain types of injuries.

## MULTI-PROTECTIVE CLOTHING

It is especially those that work within the storage and distribution of energy (gas, wind, electric and oil) industries that are now using multi-protective clothing. These employees are often outside and close to running machinery and trucks. As such, the clothing may also need to be windproof, waterproof and breathable, as well as fluorescent with reflectors. In the range there is a winter jacket and winter trousers, each of which is approved to no less than nine different standards.

The range also includes fluorescent work trousers, bib & brace and a work jacket, all of which, in addition to the usual standards, are treated with a stain-resistant coating to keep the fluorescent clothing clean and thus visible

over time. Four products are intended as inner layers: a t-shirt, a sweatshirt, a long-sleeved functional undershirt and a pair of functional underwear. All four are antistatic, flame retardant and sewn with flame retardant thread.

## TESTING IN EXTREME CONDITIONS

The MULTISAFE range is tested under extreme conditions during the Patagonia expedition in a remote corner of Chile. The fluorescent clothing is approved to EN ISO 20471. In addition, the products are equipped with even more reflective tape than the norm prescribes. All the fluorescent products hold the chemical certification EN 13034.

MASCOT





# DOING BUSINESS ACROSS BORDERS

Countries may have different laws and legal systems but this should not create a barrier to doing business across borders.

In the UK, we have a common law legal system, based upon law made by Parliament and on the interpretation of those laws by the courts over many hundreds of years. In addition, the Courts have made their own laws by applying rules and principles they themselves have developed.

## DENMARK

In Denmark and other European countries, the law is based on a codified civil system which is much more centred around the rules set by the state, with less law-making power given to the courts.

The UK's current membership of the EC has added a third layer of European law which is principally a codified system, but which is then translated into the laws of the member states and interpreted by the courts of the member state, with any final say being reserved to the European Court of Justice (ECJ).

## INTERNATIONAL TRADE

International commerce has, over a period of time, built up customs and practices which help to smooth out the differences between these legal systems. International trade is assisted by a series of pre-defined commercial terms known as INCOTERMS, which are published by the International Chamber of Commerce (ICC) and allow parties across the world to trade on one set of familiar terms.

## SHIPPING

In shipping circles, many vessel transactions and charters are governed by the Baltic and International Maritime Council (BIMCO) forms which again provide even-handed commercial terms upon which parties can contract with confidence.

It is essential that parties doing business across borders have access to legal advice and assistance from lawyers that are knowledgeable about the use of such contracts and who have an established network of lawyers across different countries able to advise



on specific jurisdictional interpretation of these terms.

## GETTING IT RIGHT

As well as getting the law right and using the appropriate international contracts, it is also useful if parties can call upon networks of other professional advisers such as accountants, bankers, agents and so on.

Unfortunately, sometimes things do go wrong, and again most of the standard international contracts provide for dispute resolution. In most cases, London is still recognised as the leading centre for dispute resolution whether via the Courts or arbitration/mediation routes. Many jurisdictions have a regional bar meaning only lawyers in the area around the court in question can practice there. In England, there is no such restriction so parties to a dispute can choose to have lawyers outside London to conduct any disputes at less than City of London legal rates.

**Andrew Oliver**  
Head of Renewable Energy

**Andrew Jackson Solicitors**  
(Admiralty Solicitors Group member)



# NEW VISITOR TO THE HUMBER

2017 promises to be a busy time on the river Humber in support of the offshore wind industry with Operations and Maintenance activity being joined by an increase in offshore construction. A2SEA is busy preparing to bring two jack-up vessels to the river for the first time to start offshore construction works.

## PROJECTS

The Danish company has successfully secured two projects for 2017 which will load out wind turbine components from the newly constructed Siemens Green Port Hull facility on the Humber.

The first of these projects will be the 402MW Dudgeon offshore windfarm for Statoil, Masdar and Statkraft, which is scheduled to start for A2SEA's SEA CHALLENGER vessel in early January 2017 and will be the first commercial load out of components from the Siemens quay at Alexandra Dock. Although there are a number of firsts associated with this project, the very experienced team which SEA CHALLENGER brings with her to deliver the project will ensure smooth sailing.

The second of the projects will be 58 MW race bank offshore windfarm for DONG Energy, which will again load out components from the Siemens facility with, SEA CHALLENGER's sister vessel, SEA INSTALLER. These two projects will run in parallel through the summer of 2017 and if the programme allows, promise to be quite a sight to behold if they are both in the Humber at the same time.

## LOCAL SUPPLY CHAIN BENEFITS

Throughout the planning phase for these two projects over the past 18 months, A2SEA has recognised the potential benefits of utilising a local supply chain to support their work on the Humber. By working with the Green Port Hull organisation, Team Humber Marine Alliance and UK Trade & Investment, they have established a strong network of suppliers based both locally in the Humber region and nationally.



The combination of local knowledge and skills with A2SEA's track record and experience across Europe, promises to bring benefits to both these projects and the local community based on around the Humber.

## POTENTIAL

The company sees significant potential for the Humber and the surrounding region to become a key element in the success not only of current projects but also the wider success of future offshore wind projects planned for the United Kingdom east coast.

## A2SEA

Andrew Jackson  
Solicitors



Practical, flexible legal services that add real commercial value to your business

If you are looking for expertise you can trust from a team who are focussed on achieving your objectives, our friendly, experienced solicitors are here to help you. Contact the team today.

Hull Office T: +44 (0)1482 325 242  
York Office T: +44 (0)1904 275 250  
Grimsby Office T: +44 (0)1472 267 770  
www.andrewjackson.co.uk enquiries@andrewjackson.co.uk



SPIRIT ENERGY FUTURE

At DeepOcean we have spirit and passion for innovation and technology. In the challenging offshore environment, our world-class expertise is depended upon for the successful development and reliable servicing of the renewables market.

Bridging present and future energy needs is essential, and it is DeepOcean that provides the vital connection between new energy systems and existing grids.

DeepOcean plays a leading role in the global supply of offshore wind power, providing a range of reliable and proven solutions under its core service areas.

- SURVEY AND SEABED-MAPPING
- SUBSEA INSTALLATION
- SEABED INTERVENTION (TRENCHING)
- SURF (Subsea Umbilicals, Risers, and Flowline Installation)
- INSPECTION, MAINTENANCE AND REPAIR
- DECOMMISSIONING



**DEEPOCEAN**  
www.deeпоceangroup.com

DeepOcean is a global provider of safe, high quality, innovative solutions for the subsea industry. A fleet of owned and chartered subsea support vessels are available to serve clients requirements, in addition, a newbuild interconnector vessel will join the fleet in 2016.

THE NETHERLANDS NORWAY UNITED KINGDOM MEXICO BRAZIL SINGAPORE



## CLOSER COOPERATION BENEFITS UK AND DENMARK

Continuing expansion of cooperation between British and Danish offshore wind companies is set to benefit both countries' home and export markets.

There is a wealth of offshore wind expertise in the UK and Denmark – both countries pioneering the offshore wind energy industry.

Offshore wind companies in both countries regard the North Sea not only as a logical home market, but also as the ideal hunting ground, in which to seek out inspiring and innovative partners. In recent years, there has been a flux of products, skills, solutions and partnerships across the North Sea.

### REINFORCED CONNECTIONS

Connections across the North Sea are now reinforced. Recently a delegation of members of Offshoreenergy.dk, the Danish national offshore cluster organisation and innovation network, will paid a visit to the Humber region of England. Companies in the Danish value chain visited the offshore O&M port at Grimsby and networked with key people and potential partners in the UK offshore wind industry.

One of the delegate companies is Stennevad A/S, fall protection specialists who work for clients on both sides of the North Sea.

*"We're here to nurture relationships. We also hope to meet new customers and establish new partnerships. We*

*offer logistics, services and know-how and we can work in any part of the value chain,"* commented Product & Key Account Manager, Kim Vittrup.

### PARTNERSHIP

The visit is a spin-off from the partnership between Offshoreenergy.dk and Team Humber Marine Alliance. It builds on comprehensive pre-existing partnerships between the two organisations and between their members.

*"The Danish and UK offshore wind companies have many strengths and are, in many ways, an excellent match."* said Mikkel Juul, Head of Internationalisation at Offshoreenergy.dk. *"Closer cooperation will be beneficial to everyone. It will weld the joins in the value chain and enable the partners to bid together for contracts more often,"* he added.

### EUROPEAN ATTENTION

The potential inherent in inter-regional partnership has also attracted European attention.

An Interreg-subsidised project is providing EUR 5.6 million to strengthen regional cooperation between Danish, British, German, Dutch and Belgian offshore wind SMEs across the North Sea.

“IN RECENT YEARS, THERE HAS BEEN A FLUX OF PRODUCTS, SKILLS, SOLUTIONS AND PARTNERSHIPS ACROSS THE NORTH SEA.”

*"Many of the major players are already active at the inter-regional level but there is also good potential for partnerships between SMEs. A stronger network of contacts is an encouraging prospect for many smaller companies."* concluded Mikkel.

### OPPORTUNITIES

Mark O'Reilly, CEO & Chairman of Team Humber Marine Alliance commenting on the opportunities for Danish offshore wind companies in the UK stated *"The best strategy for delegates is to develop relationships with local companies to leverage opportunities for the benefit of both parties."*

OffshoreEnergyDK

## MASCOT® MULTISAFE

WORKWEAR for all extremes



tested to work



EN ISO 11612



EN ISO 11611



EN 1149-3 / 5



EN 61482-1-2



EN 13034



EN 343



EN 342



EN ISO 20471



ATPV values are increased when worn in combination with other MASCOT® MULTISAFE products.



### MASCOT® MULTISAFE Emmen Jacket 13830-217-17010

60% modacrylic/39% cotton/1% carbon fibre, 310 g/m<sup>2</sup>

- Fluorescent and with vertical and chevroned crossed reflective strips. Dirt resistant. Anti-static, acid resistant and flame retardant. Protects from electric arcs and occasional welding arcs. Breathable, wind and waterproof. Taped seams. Lining of quilt. Detachable lined hood with adjustable drawstring. High collar. Fastening with storm flap and hidden press studs. Zipped pocket under storm flap. Strap for gas alarm. Chest pocket with zip. Chest pocket with flap and press stud. D-ring. Front pockets with zip. Formed cut sleeves. Extended back. Press stud adjustment at waist. Rib (hidden in storm flap) and press stud fastening at cuffs.

• Size: S-4XL

Arc Rating: ATPV = 24 cal/cm<sup>2</sup>



### MASCOT® MULTISAFE Renens Winter Trousers 13892-217-17010

60% modacrylic/39% cotton/1% carbon fibre, 310 g/m<sup>2</sup>

- Fluorescent and with reflective tapes. Dirt resistant. Anti-static, acid resistant and flame retardant. Protects from electric arcs and occasional welding arcs. Breathable, wind and waterproof. Taped seams. Lining of quilt. The removable braces are made from strong elastic Belt loops. D-ring. The waistband is higher at the back, to better protect against the cold. Fly with zip. Front pockets. Back pockets with reinforcement, flap and hidden press studs. Thigh pocket with flap and hidden press studs. Phone thigh pocket. Reinforced ruler pocket. Adjustable knee pad pockets with flap and top access. Zip with storm flap on outside of legs.

• Size and leg length: S-4XL • 82 cm: C 46-C 66

Arc Rating: ATPV = 24 cal/cm<sup>2</sup>

## MASCOT® MULTISAFE catalogue online

<http://papers.mascot.dk/Mascot/UK/Multisafe2016UK/>



# MASCOT® WORKWEAR

# CREATING PERSONAL OPPORTUNITIES

Offshore wind is a growing market, with the sector set to exceed previous levels of growth. Great Yarmouth-based 3sun Group, is a provider of products and services to the global energy industry and believes that ongoing local recruitment is crucial to meeting project demand for operational sustainability into next year and beyond.

## SPECIALISTS

3sun Group specialises in installation, maintenance and servicing of wind turbines and has collectively installed more than 4000 turbines during its 15 years in the wind industry. The company is currently inspecting more than 70% of the UK's existing offshore wind capacity and has significant experience within multiple countries and regions, including numerous projects in the Humber area.

## NEW HULL BASE

In May this year, 3sun Group opened a new base in Hull to meet the demand for installation, inspection and maintenance services for the offshore wind industry in the UK and Europe. The Group began recruitment in July, with a focus on utilising local skills and talent in order to meet client requirements in the area.

Gary Horner, Renewables Operations Co-ordinator commented: "We're fortunate to have worked on some major projects in Hull and Grimsby this year, including turbine pre-assemblies, full mechanical electrical completions, yaw claw retrofits and general servicing. Our capabilities for servicing and maintenance continue to expand and allow us to offer a full turnkey solution for renewables projects."

"The opening of our base in Hull also enables us to continue to advance our long-term growth plans but most importantly, ensures that we carry on exceeding our customers' expectations and meeting the demand for services in the region."

## IN-HOUSE TRAINING PROVIDER

3sun Group has the capability of providing specialist training to new employees, through in-house training provider 3sun Academy. It is also an accredited provider of the Global Wind Organisation (GWO) certificates, which are essential qualifications for those working within the wind industry.

Gary continued: "Our Academy plays a vital role in providing opportunities and experiences for local talent, which will ultimately help to remedy the current skills shortage in the industry. We're committed to employing and developing a local workforce, in particular our core electrical/ mechanical technician roles, utilising the expertise of those who live in close proximity to Hull and have a good knowledge of the area."

"Safety is our first priority in all of our operations so our in-house GWO training allows us to ensure that all new personnel are fully qualified with essential safety skills for renewable projects."

“3SUN GROUP IS COMMITTED TO SUPPORTING THE NEXT GENERATION OF YOUNG INDUSTRY TALENT.”

## LOCAL RECRUITMENT

Gary added: "We continue to recruit locally as we look forward to 2017 and prepare for projects on three major windfarms in the Humber region. We're keen to hear from time served electricians and mechanical technicians, as well as apprentices. These kinds of pre-assembly projects are ideal for apprentices starting their careers in the industry, as they offer hands-on, practical experience which enables them to progress into technician roles in the future."

"Providing opportunities for the next generation remains an important part of our ethos and we have approximately 30 apprentices who are now integrated into every element of the Group through our training initiatives."

## YOUNG TALENT COMMITMENT

3sun Group is committed to supporting the next generation of young industry talent and pioneered a new way of training and developing young people through its innovative Pre-Apprenticeship Programme. In affiliation with Great Yarmouth College, 3sun Group's two-year programme is based around a 40 hour working week and is designed to address the balance between practical, theoretical and work-based learning. It offers technical skills in the form of BTEC units, practical skills through engineering operations and work placements.

The programme has the ability to shorten the timescales for young professionals entering skilled work and exposes them to realistic working environments in all areas of an offshore business. Last year's intake had the opportunity to gain hands-on experience on a number of projects including wind turbines, a wind energy museum and a steam-powered herring drifter.

## FUTURE

Looking to the future, Gary concluded: "As the current industry climate improves and further proposed windfarms come to fruition, we hope that the region will continue to play a key role in offshore renewables projects, leading to a steady stream of employment opportunities in the area and an increasingly thriving economy."

## 3sun Group

<p>SCAN/CLICK</p> <p>MORE INFO</p>	<p>SCAN/CLICK</p> <p>LINKEDIN</p>	<p>SCAN/CLICK</p> <p>TWITTER</p>
------------------------------------	-----------------------------------	----------------------------------





# RECRUITMENT – A DIFFERENT APPROACH

Following a strategic decision by the Bostonair Group to enter the renewables industry, the recruitment policy from the beginning was to train and transfer personnel from within their highly skilled aviation engineering workforce, enhancing these candidates to Siemens Level 4 standards to meet the O&M activities associated with wind turbines.

This approach gave Boston Energy the ability to support Operations and Maintenance teams with quality engineering support from the onset and has proved a great success at site level support.

## CANDIDATE RECRUITMENT BACKGROUNDS AND PERSONNEL INVESTMENT

Boston Energy recruit and train candidates from mechanical and electrical backgrounds which involve re-skilling. These can be drawn from heavy or light mechanical, commercial electrical, military engineering, aeronautical or other heavy mechanical industries.

The company believe this broad approach brings a wide range of skills, experience, maturity, flexibility and a 'can-do' attitude that identifies Boston Energy as delivering services at a level to exceed expectations. With a continuous improvement focus – the company have committed to training across a broad range of turbine types, developing core service competencies and working towards involvement in construction roles.

Valuing transferable qualifications and setting a standard to recruit the skills that improve the industry from the bottom upwards has seen marked improvement in standards whilst reducing client supervision costs through enhancement training to client competent technician standards.

## VISION

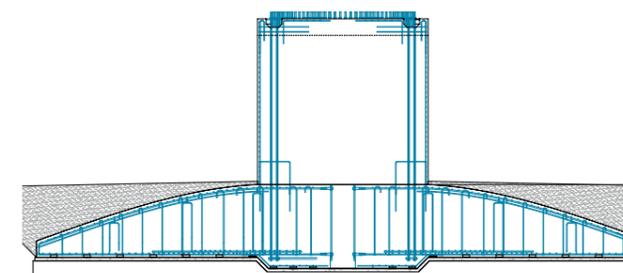
Boston Energy believe that their vision and approach to service delivery shows a genuine commitment to standards improvement and a fresh, dynamic perspective which has been well received across all their client base.

## Boston Energy



## STUB FOUNDATIONS

Utilising stub foundations optimises consented height and maximises return



Peikko are worldwide experts in on shore foundation solutions

[www.peikko.com/wind](http://www.peikko.com/wind)

# A RECRUITMENT AGENCY WITH A DIFFERENCE

**People with Energy (PWE) a UK-based recruitment agency, with more than three decades of experience matching highly skilled candidates with some of the world's leading employers.**

Having initially started out as a specialist recruiter for the energy production sector, they have expanded their services to work with clients in some of the fastest growing industries, including smart technology, renewables, construction and engineering, as well as general commerce. All of their consultants have extensive knowledge of their industry and using their expertise and contacts can help to place candidates in the perfect role.

## A FORWARD THINKING AGENCY

Having spent more than three decades establishing themselves as one of the country's most trusted and knowledgeable recruiters, the agency has grown to become a forward thinking agency at the cutting edge of some of the fastest growing industries. They have built strong links with companies both domestically and internationally, helping them to create an extensive network. This gives them the knowledge, contacts and expertise required to provide an unrivalled recruitment service for permanent, temporary and contract roles anywhere in the world.

## THE TEAM

With knowledge and contacts which span multiple industry sectors, the agency's recruitment consultants can offer you a personalised and supportive service as you take the first steps towards your new career. From initial contact candidates will find the team to be friendly, approachable and always on hand to provide guidance with finding the ideal role or preparing for interview.

## CANDIDATE SUPPORT

With dozens of candidates applying for the same role, it is crucial that candidates make themselves stand out from the crowd. All of the resources have been prepared by the experienced recruitment



consultants and offer the tips and advice required to ensure that the candidate best demonstrates why they are the ideal person for the job.

Advice includes...

- Writing the perfect cover letter
- How to write the perfect CV
- How to structure a CV
- Tailoring a CV to specific roles
- Explaining what makes a candidate unique
- The importance of proofreading
- How to impress at interviews
- 5 Tips for making the right impression
- How to answer common interview questions
- Asking the right questions
- The do's and don'ts of group interviews

## CLIENT SERVICES

People with Energy provide the complete range of recruitment services to help to identify candidates for both permanent, temporary and contract positions. The services vary from working with clients to

recruit for a single role or for a set period of time, through to developing long term working relationships and managing the complete recruitment process.

Services include...

- Contingency services
- Preferred/Sole Supplier
- Recruitment Process Outsource (RPO)
- Retained Services
- Executive Search
- Outsourced Payroll

## CONSISTENT HIGH LEVEL OF SERVICE

The team provide a friendly and efficient service, and are happy to work with businesses of all sizes. It does not matter whether you employ 10 people or 1000 people, clients can expect to receive the same high level of service.

## People with Energy

## Serving the world of Hydrography & Oceanography



Tide Gauges



Telemetry



Optical Sensors



Tel: +44 (0) 1803 869292  
Fax: +44 (0) 1803 869293  
sales@valeport.co.uk

Valeport Ltd | St Peter's Quay | Totnes  
Devon | TQ9 5EW | United Kingdom

www.valeport.co.uk



Wave Recorders



CTD & Multiparameter



Current Meters



Ocean Engineering



Echo Sounders & Bathymetry



Sound Velocity

**9490**  
AREA WORK LIGHT

## OnShore? OffShore? BE SURE...

**Rely On Peli**

- ▶ Rugged, Rechargeable & Portable
- ▶ Easy and quick to set up
- ▶ Battery can be swapped to extend light duration
- ▶ Mast extends above 1.8 metres
- ▶ Intelligent control to programme light up to 24 hours
- ▶ Self-contained system

**PELI PRODUCTS UK**

**10% AREA LIGHTING OFF**

ORDER ONLINE [www.peliproducts.co.uk](http://www.peliproducts.co.uk)

Use code: **LIGHTUPTHE DARK16**

**T: 01457 869999**

**PELIProducts.co.uk**



# READY, WILLING... AND VERY ABLE



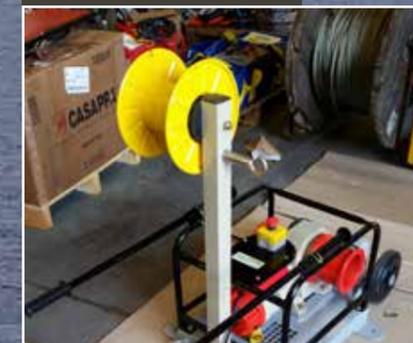
GH200 Hydraulic Capstan



WS09 Hydraulic Power Pack



HW-1500 110v/240v Cable Puller



Based in Hull, literally just across the dual carriageway from the new Siemens Turbine Blade Factory is Winch Systems which has been established for more than 17 years.

The company's specialisation is installing, servicing and testing standard and bespoke winches/hoists for customers including National Power generation and utility companies as well as the Environment Agency, they are therefore used to complying with exacting technical and logistical expectations.

### PRODUCTS AND ACCREDITATION

Winch Systems offer a complete range of electric AC/DC, hydraulic, hand winches and associated accessories and equipment. The company commitment to offering quality products and service is demonstrated by our accreditation to ISO 9001 Quality Assurance. Accreditation to ISO 14001 and 18001 also proves their concern and focus on the environment and staff Health and Safety.

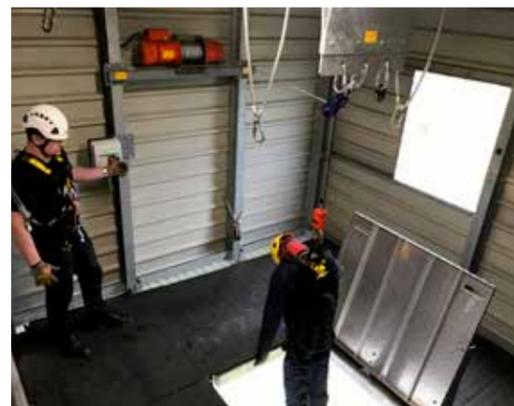


### ACCESSORIES

To compliment the range of cable pulling and blowing equipment, as the sole UK importer/distributor for Vetter Kable, the company also offers a variety of cable installing accessories from rollers to swivels.

This equipment is essential for the laying of power cables ranges from low to extra-high voltage. The cables are

laid in systems, in the ground, in ducts or in tunnel systems. With the increased transition to more sustainable and renewable energy sources, cables are also increasingly installed in offshore windfarms.



### PLANNING TO FINAL INSTALLATION

Often, the best cable laying devices and machines alone are simply not enough. With a combined wealth of knowledge and experience the company is on hand to be involved from the planning phase right through to final installation.

### CLIENT TESTIMONIAL

The company's winch systems are used by a variety of clients in the renewable sector, from construction through to active service, maintenance and even rescue training. One such company is HFR Solutions CIC who approached them with the task of lifting equipment up their tower in wind turbine rescue simulation courses.

“THIS EQUIPMENT IS ESSENTIAL FOR THE LAYING OF POWER CABLES...”

The Global Wind Organisation and Renewable UK Working at Height & Rescue workplace safety courses are delivered from their base in Hessle, Hull. A custom install was designed and fitted including 500kg mains 240v winch.

Dale Barrett, Working at Height Lead Instructor, HFR Solutions CIC commented: "We deliver work at height training on a frequent basis for personnel working offshore on wind turbines and require a bespoke solution to manual handling issues around raising and lowering equipment."

"Recently, Winch Systems visited our purpose-built training facility, witnessed our working practices, to gain a thorough understanding of our requirements. Installation of the winch was carried out very promptly and we have been delighted with the level of aftercare service"

### NATIONAL GRID

The company designed and developed the GH200 Hydraulic Capstan for the National Grid to enable loads be lifted in remote locations up power pylons, whilst not overstressing the structure. Versatile and portable this capstan winch is now used by major utility companies and contractors in the wind energy sector. Designed to lift equipment and tools up to 200kg it incorporates a hydraulic failsafe brake and rope jamming cleat to prevent accidental dropping. The winch unit is designed to be used with their universal mounting bracket with mechanical interlock.

The GH200 may be used in any location when coupled to their WS09 Hydraulic Power Pack where there is no other power source. Depending on operational guidelines and constraints it is

possible to upgrade to the GH500 with a 500kg lifting capacity.

### CABLE PULLING

Cable pulling has never been easier with the HW-1500 110v/240v Cable Puller. Features include dual pulling capacities of 1,500kg and 2,500 kg, two speeds according to drum size, overload protection, heavy duty industrial bearings with rugged high power motor. Suitable for continuous use the HW-1500 can tackle the toughest wall, ground and underground pulling applications.

Winch Systems would like to take this opportunity to personally thank Dawn and the Green Port Hull team for their continued help and support in relation to offshore wind opportunities in the North Sea region.

### Winch Systems





# PROBLEM SOLVING MADE EASY

Blackrow Engineering has been providing outstanding engineering services to industry for 36 years. Their dynamic approach to doing business means they find solutions to problems by defining, creating and delivering value without compromising on quality.

## DRIVING BUSINESS

With a workforce of over 175 committed and highly trained people, all driving the business forward by working with both new and existing clients, Blackrow has a combination of people all trained to operate in a multitude of sectors.

The company operates in process industries such as Petrochemical, Power Generation and Renewable Energy providing on/offsite excellence including...

- Heavy Fabrication
- Sheet Metal
- Coded Pipe Systems
- Machining
- Laser Cutting
- Electrical Contracting
- Control & Automation Systems
- 2D & 3D Design

## FACILITIES

Blackrow's unique selling proposition is its vast and highly equipped facilities as well as its proximity to the Humber Bank Industrial Zones and the UK's largest port in Immingham as well as the Port of Grimsby East, widely renowned in the offshore wind industry.

## ENGINEERING MANUFACTURING FACILITY INCLUDE...

- 10,000sqM Facility
- 175 Skilled People across 5 trades
- Overhead Cranes allowing 100T+ Fabrications

## UNIQUE OFFERING

The company has built its structure, capacity and capabilities over recent times to provide a unique offering to both the local petro-chemical industry as well as the emerging energy sector, with recent success of manufacturing orders for 2 global players in oil & gas and power generation.

Blackrow believes that the combination of fantastic people and facilities, a robust focus on customer needs and unrivalled capacity in the area combine to provide the go to solution for your engineering service needs.

## Blackrow Engineering

# A COMPANY NAME THAT SAYS IT ALL

Direct Gaskets Limited has been established for over 25 years in the 2017 City of Culture - Kingston upon Hull.



Manufacturing and supplying gaskets all around the country have given the company a loyal customer base, stretched far and wide covering a whole manner of industries for example... chemical, petrochemical, pharmaceutical, marine, motor, food, leisure and many more.

They offer an unbeatable service at great value for money in bespoke items as well as standard flange gaskets such as, ASA 150, PN16 and BS Table 'E' from 1/2" up to 42" series A & B.

## PRODUCTS

The wide variety of materials they stock including 16 different types of rubbers inclusive of Nitrile, Neoprene, EPDM, Silicone and Viton and a huge range of NAF (Non-Asbestos Fibre) sheeting, lets any customer have a choice of gasket for their application. If however, the choice seems overwhelming - all of the staff on site have fantastic knowledge of all materials they offer to help with the gasket ordering process.

Not only do they offer rubber and fibre in sheeting or cut gaskets they offer, cork, oil paper, PTFE, sponge, felt, plastic shim, turbo exhaust materials and leather; as well as being stockists of Vulcan Engineering's Gland Packing range.

As well as all of this available stock the company keep half a million 'O' Ring's on the shelf in standard Nitrile material in imperial and metric sizes. Other materials are available on request such as Viton, EPDM, Red Silicone and PTFE.

## OUT SOURCING

On site Direct Gaskets only cut semi-metallic gaskets such as the turbo exhaust materials but can out-source copper head gaskets manufactured to pattern. The fully metallic gaskets they offer from stock are spiral wound gaskets available in standard graphite filled - other compositions are available on request.

## EXPANSION

In August 2016, Direct Gaskets relocated to Dansom Lane South in Hull. This move to new premises has seen them quadruple in size. With this relocation, Direct Gaskets plan to double available stock and progress into new ventures.

## Direct Gaskets Limited



HUMBER UPDATE

HUMBER UPDATE



Another D2862 being prepped for installation

# THE EVOLVING SUPPLY CHAIN

A company that helps keep offshore wind technicians on the move has been welcomed to North East Lincolnshire as the latest element of the evolving supply chain.

PME Group has opened a base in Stallingborough, providing immediate access to crew transfer vessel engine servicing and repair.

## LOCAL ASSISTANCE IN SET UP

Paul Vincent, Project Development Manager at PME Group, told how it had been a six-month task to set up the base. He thanked local North Sea Services' vessel Operations Manager David Smith for his advice, help and introductions to Rachael Markham, of North East Lincolnshire Council's economic development team and Lorraine Alexander of Grimsby Jobcentre Plus, who he also expressed gratitude.

David of North Sea Services commented: "We operate and maintain E.on's vessels in Humber Gateway windfarm and we have been working with PME since the vessels went into service in 2014. Initially there was a certain geographic limitation with us being up here and PME being in Poole and Plymouth."

"In the interim we have used other MAN agents, but never received the same standards of service we had seen from PME. As a company we are very pleased to see PME open this depot in our area."

## HIGH EXPECTATIONS

"We are a demanding bunch. Our clients expect our vessels to be available at all times, we want the breakdowns fixed before they happen and servicing to occur so we don't even know it has taken place."

"The engineers work to very, very high mechanical engineering standards, and PME keep them up-to-date with the latest innovation. I am looking forward to a closer partnership."

An administrator and engineer will be permanently based at the facility, on Beel's Road, North Moss Industrial Estate.

## PROUD HISTORY

Ed Tucker, Customer Service Manager for MAN Engines & Components UK, said: "MAN has a proud history of being involved in marine diesels. The first ocean-going diesel powered engine was a MAN in 1912, and since then we have been at the forefront of marine diesel engines. We can only do that through partnership with service partners. We are only as good as our people on the ground, supporting our products and keeping our customers happy."

"With PME we have confidence when engineers go out to a job. We know they are doing the job to the highest standards."

## MP GUEST VISIT

Great Grimsby MP Melanie Onn – joined by representatives of Grimsby Renewables Partnership and the local authority – it was an opportunity to meet the team of a vessel she christened when Humber Gateway was inaugurated in September last year.

Melanie added: "It is really exciting to see this supply chain arriving, growing and employing local people. It is here, it is happening, and it is an investment in the area, in training and the industry."

## PME Power Systems Group Ltd



# GETTING DOWN TO THE DETAIL

MWD (Hull) Ltd was formed in 2004, based in Hull. The senior employees have a combined 60 years' experience in the design of marine handling equipment, electrical control panels and installations and the manufacturer of bespoke control systems to customer specific requirements.



The company design and manufacture winches to suit customer's specific requirements and have been supplying winches to wind turbine workboats for the last 3 years, whilst also carrying out on-board electrical and hydraulic installations, testing and commissioning.

## WINCH SUPPLY

Winches can be supplied for various applications and with various drive options including...

- Aluminium Winches for the Wind Turbine Workboats
- CTD Handling
- Sonar Winches
- Lift Winches
- Electric Drive Winches – Variable Speed
- Electro-Hydraulic Winches

## CONTROL OPTIONS INCLUDE...

- Manual at Winch
- Remote – Hydraulic
- Remote – Electrical
- Wireless Remote

## SPECIFICATIONS

Winches can be supplied in accordance with classification society rules including DNV and Lloyds, are fully tested and come complete with a full certification package including material traceability, weld procedure specifications and welder certificates.

Manufactured in aluminium, steel or stainless steel or any other material selected which can be supplied as stand-alone units or designed to integrate with existing customer equipment as well as providing a total winch solution, including electrical and hydraulic control systems.

## MWD (Hull) Ltd





# MARITIME ELECTRONICS FOR WINDFARM SUPPORT

With windfarms continuing to grow in size at Dogger Bank, Creyke Beck, Hornsea and various other locations off the UK East Coast, the Ships Electronic Services (SES) Grimsby facility has become its windfarm support vessel specialist centre providing Navigation & Communication equipment on vessels operating in the Humber area.

### ENVIABLE REPUTATION

The company has built an enviable reputation over the last 40 years for its highly professional service and the ability to supply, install and maintain the world's most advanced marine electronics systems. Working with all marine related applications from windfarm service vessels to commercial shipping, workboat, naval, oil and gas and superyacht, their engineers have experience in advanced maritime technology from satellite and on-board communications to bridge controls, navigation and entertainment systems.

### SERVICE AND EXPERTISE

Due to the high standards of service and technical expertise offered many of the industry's most respected manufacturers such as Furuno, Raytheon and Sailor have appointed the company for service support and installation. The company is the sole UK distributor and service provider for Raytheon Anschutz, sole onboard service centre for Cobham and is a warranty service provider for the mobile satellite communications leader, Iridium.

### QUALITY CONTROL

As the company has expanded its capabilities and services over the years they have ensured its quality and control systems have developed to provide customers with the level of service expected of professional operations. SES is one of the few marine electronics service providers accredited with ISO 9001 and has certifications from Lloyds Register, Bureau Veritas, ABS and FPAL.

### ENGINEERING CENTRES

Engineers are factory trained by manufacturers to install, service and supply to shipyards and ports around the UK from its network of 9 centres which include Grimsby, Liverpool, and the Rochester headquarters. In Scotland, the Aberdeen facility specialises in services to the oil & gas industry while Grangemouth also serves commercial shipping and fishing. The Poole service centre handles electronics and communications supply to both the commercial shipping and leisure boating markets, with other facilities in Plymouth and Cornwall.

### 24/7 SERVICES

The company has a 24 hour, seven day a week service and support line which is operated by professional engineers capable of talking through problems and solutions whenever and wherever they occur.

### Ships Electronic Services



TOTAL ACCESS SYSTEMS  
...innovators & designers of access equipment

### CRAIG ENGINEERING TOTAL ACCESS SYSTEMS LTD.

- Safe Working at Height Specialists.
- **Wind Turbine Access.** Building Façade Access.
- **Supply & Install Temporary Suspended Access Platforms.**
- Design, Manufacture, Install, Test Commission & Maintain.
- Permanent Access Equipment.

www.craigeng.co.uk | 01482 821262 | sales@craigeng.co.uk



Your single point of contact for the supply and service of compressed air systems



Unit 6 Westside Business Park  
Off Estate Road No2  
Grimsby, DN31 2TG

www.marshallbrewson.co.uk Tel: +44(0)1472 359001

UK Leading MAN Marine Dealer Sales, Service & Support

### GRIMSBY BRANCH NOW OPEN

Unit 4B Beels Road, North Moss Lane Ind Est, Stallingborough, Grimsby DN41 8DN  
www.mandiesel.co.uk • info@mandiesel.co.uk • 01472 806216



XXXXXXX

# PARTNERSHIP DELIVERING BASIC SAFETY TRAINING TO THE ENERGY ESTUARY

The Humber Region has become a focal point for the renewables industry, and for HOTA, as an award winning training provider, the growth is particularly welcome.

In order for the progress to continue, local companies needed to find the fine line between competition and collaboration. To this end, HOTA joined forces with HFR Solutions in 2015 to provide a seamless GWO/RUK training package.

Courses available include...

- 2 Day First Aid
- ½ Day Fire Awareness
- ½ Day Manual Handling
- 2 Day Marine Safety Training
- 2 Day Working at Heights

## EXPERIENCE

As an award winning training provider for the maritime and oil & gas sectors, HOTA has been able to transfer 28 years' experience into the new challenge of offshore and onshore windfarms. The wind industry's five basic safety training modules ensure the whole workforce is equipped with practical training and knowledge to safeguard them within dangerous working environments.

## BACKGROUND

HOTA a Limited company with charity status was established in 1987 by the offshore Industry for the offshore industry, meaning local employees working within the regions oil & gas industry no longer had to travel out of the area for national approved training.

Their primary aim was to provide training and facilities for the oil & gas sector, investing all surplus funds into enhancing its training facilities. Through diversification and industries ever changing needs HOTA now trains over 8,000 delegates annually from all over the globe.

## SHORT COURSES

Short courses range from essential requirements for working within a specific industry, recommended courses and also those which provide a valuable addition to current skills or qualifications. More than 100 training courses make up HOTA's current portfolio with the majority of these being nationally approved by

the relevant awarding bodies. Courses are currently offered across 10 training streams for the relevant sectors including offshore, maritime, renewable, electrical, emergency response, first aid and health & safety.

## ACCREDITATION

Gaining accreditation for GWO/RUK was a must as the industry recognised a skill shortage. To compliment the GWO/RUK renewables training courses, HOTA also offers the full suite of Maritime STCW10 courses which covers all the training requirements for the whether it's erecting the offshore wind turbines or transporting crew to maintain them.

## NATURAL PROGRESSION

Karen Shepherd, General Manager quoted "With over 25 years' experience in training for the oil & gas and maritime sectors it is a natural progression for HOTA to enter into the renewable industry."

HOTA boasts 3 major sites in Hull, 2 on Malmo Road and 1 on Albert Dock and has increased its workforce to over forty five staff. Excellent facilities are offered to delegates including free on-site car parking, Wi-Fi, restaurants and amenities.

Their success comes from industry experienced professional instructors, state of the art facilities and the ability to adapt to industry's training needs. Along with regular timetabled courses the training company is also renowned for its flexibility and ability to adapt training to meet specific training requirements offering tailor made, bespoke courses when, where and how they are required.

## CLOSE WORKING RELATIONSHIP

The close working relationship between HOTA and the Humberside Fire Brigade began in 1988 and then in 2015 a formal partnership between HOTA and HFR Solutions was established. The partnership has enabled that the full suite of training that meets the standards of the Global Wind

Organisation (GWO) and RenewableUK (RUK) in first aid, fire awareness, marine safety and working at height are being offered as a one stop shop within the region. This is a major advantage for companies within the renewable sector and their supply chain to train their employees in one location saving them both valuable time and money.

Karen commented: "The partnership is working well, it was an excellent opportunity for two highly professional local companies to collaborate and offer their expertise from the maritime and offshore industries and the fire and rescue service, to the renewable industry with first class nationally approved training providers and facilities."

## HFR SOLUTIONS BACKGROUND

HFR Solutions was established in 2012 to take the skills, knowledge and expertise of Humberside Fire and Rescue Service to the commercial sector, with the vision of enabling their business partners and community to be safer, every single day.

HFR Solutions is a community interest company investing all surplus in either community based safety initiatives or directly back into the business.

## NATURAL FIT

Nick Granger, Director at HFR Solutions said: "This is a really exciting partnership as it incorporates the established training facilities at HOTA in Hull with the new training facilities of HFR Solutions in Hessle. The partnership is a natural fit as we are both local training providers initially established to deliver training for the region to benefit the local community, however, we have seen an increase in delegates attending courses from all over the UK and internationally."

## HOTA





# REACHING FOR THE SKY

Based near to the Humber Bridge, Humber Access Limited, like the landmark, stands tall among its competitors. Constantly adding innovative solutions to the offshore wind energy sector both in the UK and Europe, the company is growing rapidly.

A specialist provider of rope access solutions, they provide the safest and most cost effective methods, accredited to ISO 9001 standards.

## RECENT PROJECTS

Recent local projects include inspections and maintenance of all wind instruments at offshore locations including Hornsea, Dogger Bank and further in the North East, their teams have provided services to the met masts from Blyth and Teesside. Recently repairing and carrying out TP paint repairs as well as ongoing maintenance.

Due to the position of the masts the journey to and from can be uncomfortable with swells of up to 4 metres you certainly need your sea legs. The instruments are placed up the met

most structure and the highest placed at the top which is approximately 80 metres above open water, you can feel very exposed to the elements.

The instruments on the mast are key as they inform windfarm design in the offshore industry, as well as contributing towards energy production estimates. With many years combined experience of working at height in difficult to access areas Humber Access were the obvious choice.

## WORKING TO CLIENT REQUIREMENTS

Within the renewable sector, the company pride themselves on being able to mobilise within short notice to fit within good weather windows. Their teams are able to assist and complete operations and maintenance (O & M) projects, including internal/external blade repair,

blade inspection, paint inspections. Blade technicians hold the vast certifications set by the industries leaders including all GWO modules and are trained and certified through the Amu-Syd Technical College in Denmark.

The blade teams also include technicians who are offshore advanced rescue trained, Latchway SRL inspection, maintenance and recertification, LPS (Lightening Protection Systems) trained and PCU DinoShells (Power Curve Upgrade) trained to maximise aerodynamics.

## Humber Access

# REFURBISHED HOTEL TO PLAY CENTRAL ROLE IN RENEWABLES REVOLUTION

A newly refurbished hotel in east Hull will play a central role in the city's renewables revolution thanks to Humber accommodation specialist Nightel Ltd.



Image caption: (L-R) Sam Cook, General Manager of Nightel Humber on Humberside Airport and Kayley Walker, General Manager of Nightel Express.

The Embassy Hotel on Hedon Road was bought by Nightel owner Paul Green in early 2016 and has been fully refurbished and rebranded as Nightel Express.

Situated opposite Alexandra Dock, the hotel will principally be used to provide accommodation to engineers and technicians in the renewables industry coming to work in the city.

## REVAMPED CAFÉ AND BAR

However, it is also open to people visiting the area for other reasons, and non-residents will be able to use the newly revamped Gingers café and bar. Paul said the hotel was perfectly situated for easy access to the docks, making it the most obvious choice to renewable workers coming to Hull.

## FACILITIES

Nightel Express has 23 rooms, each featuring free wifi and BT and Sky Sports, and a conference room with screens and projectors for businesses.

Paul added *"The Embassy has always been popular with locals and visitors alike and is well known in the city. But as the renewables revolution gathers pace, it's location has become its greatest asset. It is situated directly opposite Alexandra Dock where Green Port Hull is taking place and while that is happening the need for quality accommodation for engineers, technicians, consultants and all sorts of other workers is going to be huge."*

## SPECIALISTS

*"We're specialists in providing accommodation for offshore workers in both the oil and gas sector and the renewables industry so this is an extension of what we already do and it is the first hotel in Hull to be targeted specifically at the renewables industry."*

As well as Nightel Express, Nightel operates Nightel Humber on Humberside Airport – a hotel which provides dedicated accommodation for offshore workers – and a number of luxury,

serviced apartments in Hull city centre usually occupied by visitors to the city or senior managers and directors.

## LOCATION

The company is also building the region's first Hampton by Hilton hotel, also on Humberside Airport, to cater for business travellers and holiday makers travelling to and from the region.

*"As the renewables industry grows on both sides of the estuary Nightel is growing with it. Our accommodation has been specifically designed with the energy sectors in mind and Nightel Express is the latest addition to our portfolio to provide this."* Paul concluded.

## Nightel Ltd



# OVER 50 YEARS' INDUSTRY EXPERIENCE

## ... and still progressing

Northern Divers (Eng) Ltd, was originally founded in 1963 to provide a wide range of underwater services to the civil engineering and marine industries, public utilities and harbour authorities. The company have been involved with many national and international projects, in addition to providing inspection, repair

and maintenance services to a wide range of clients both on land and in water.

### MAINTAINING A LEAD

The company has always maintained a lead in underwater technology and is equipped with the most up-to-date

diving, inspection, maintenance and repair equipment, as well as dedicated personnel designing and installing scour protection to both inland and coastal areas.

Over the years they have grown, and not only specialise in commercial diving but in many areas requiring specialist services including; commercial diving to 50 metres, inland and coastal work (up to 12 miles offshore), windfarm operations, harbour and dock maintenance, salvage, sluice/gate maintenance, structural inspections and repairs, bridge inspections, topographical surveys, confined space inspections/rescue, pipeline installations and safety boat works to name but a few!



# KCOM

Connecting businesses across the energy industry

## 01482 337733

[heybusiness.kcom.com](http://heybusiness.kcom.com)



Connectivity



Security



Voice



Mobile



Hosted Services



Advertising

### WIDE EXPERIENCE

Northern Divers (Eng) Ltd have worked on a wide variety of marine projects and always prioritise customer satisfaction and cost-effectiveness. We are also lateral thinkers, and are able to help develop projects in a variety of practical ways including early re-design of component parts to allow the safe and practical installation by our trained diving personnel, thus leading to cost and time saving on projects. By utilising skills they have collaborated with some renowned companies across the globe in windfarm projects, marine projects, environmental projects and shipping and pipeline construction.

### PROVIDING CLIENT NEEDS

Since the company first started they have been involved with many major international projects, such as windfarm works, dam and harbour works and are able to meet any client needs from being able to provide the offshore diving support to IMCA specifications, to offering a 24hr emergency shore based call out service utilising a mobile fleet of vehicle mounted diving equipment to a very high standard.

This also allows the company to carry out a vast array of shore based works for many civil engineering companies. With the vast knowledge and experience that Northern Divers are able to assist and give the correct and honest advice for all projects.

**Northern Divers (Eng) Ltd**

# BRINGING JOY TO PEOPLES' LIVES



The response you generally get when you tell someone you are an Estate Agent is "I would love that, having a nose around everyone's houses."

Debra Rason, Business Development Manager at Riverside Property further explains the professional role of the estate agent...

Of course you do get to do that however it certainly is not something I would consider a feature. The best part of being an Estate Agent is the joy you can bring to people's lives on a daily basis. Finding the perfect property either to rent or to buy can be a defining moment in many peoples' lives as it can be linked to new opportunities and fresh starts.

### PRIDE IN MAKING A DIFFERENCE

At Riverside Property (established in 2004) we take great pride in making a difference, a difference in service a difference in property standards and a difference in price. We are based in The Fruit Market which is an amazing place to work attracting such diversity and pushing forward with new and innovative ideas.

### CITY OF CULTURE

Our family run organisation is at the heart of the City of Culture and we embrace the exciting ventures people in this area are undertaking. It is a pleasure to be part of Hull's exciting future and watch the city around us flourish with new restaurants to wonderful art exhibitions and amazing new developments.

We play an active role in the area and support a local art group adding to the cultural ambience of the area. Victoria Dock is just a short walk away and a fabulous place to live sporting its own local amenities including a local pub with a family friendly restaurant, a great place to relax and get to know the locals.

Heading the other way the lovely Marina is a stunning sight and people regularly promenade enjoying the views of the River Humber. The City Centre has vibrant shops and free entrance to amazing museum's proving Hull truly is a City of Culture.

**Riverside Property**



# AIRPORT VITAL TO AREA'S THRIVING RENEWABLES INDUSTRY

Humberside Airport has recently announced the launch of the first scheduled flights to Aalborg and Billund in Denmark, helping to strengthen renewable energy links between the regions.

British Airways' franchise partner, SUN-AIR, operates the route and it is hoped it will help spark an economic boost to the Humber and its burgeoning renewables industry.

### TWICE-WEEKLY SERVICE

The twice-weekly service, which commenced in April, provides direct flights to and from airports close to Siemens Wind Power bases in Vejle, Brande and Esbjerg. Commuting times have been cut between Siemens Danish operations and the new blade factory in Hull.

### CLOSE CO-OPERATION & OPPORTUNITIES

Humberside Airport worked in close co-operation with Siemens Wind Power, Green Port Hull, Hull and Humber

Chamber of Commerce and SUN-AIR to secure the route, which it hopes will help drive inward investment.

Deborah Zost, Humberside Airport's Managing Director, said: "This new British Airways service will bring new opportunities to the Humber region as air-links such as this will benefit the local economy."

### GREEN PORT HULL

"The vision for Green Port Hull - a collaboration between Hull City Council, East Riding of Yorkshire Council and Associated British Ports - is to create a world-class renewable energy centre, bringing employment and prosperity to the region and the development of this route is a very positive step in helping to achieve this."

"Not only is this advantageous from a commercial perspective, but it also provides further destinations for people across the region to explore. It also establishes links with Scandinavia for European tourists to visit Hull as part of the UK City of Culture celebrations in 2017."

### DEVELOPMENTS

Humberside already offers flights across Europe to destinations such as Amsterdam, Aberdeen and Majorca. It has recently been involved in a number of developments including the new BAE Systems National Training Academy, Hampton by Hilton hotel and a new year-round service to Tenerife.

### Humberside Airport

## PRONTOPORT

our people, your solution

Specialists in electrical and mechanical engineering services, working hard since 2006 to expand our services to meet the growing demands of the wind sector.



Offering comprehensive support for asset management and maintenance to existing wind farms across the UK.

Working in partnership with our clients to provide fully tailored services and long term business advantage.

Providing pre-assembly and installation support to new, on and offshore wind farms.

Servicing, blade inspection and NDT inspections of existing wind farms.

Key clients include GE, MHI Vestas, Siemens Energy, Scottish Power Renewables (SPR), E.on, Nordex, Senvion, IEC and RWE

[www.prontoport.co.uk](http://www.prontoport.co.uk)

+44 (0) 1294 274 558

[enquiries@prontoport.co.uk](mailto:enquiries@prontoport.co.uk)



## Providing Good Quality Properties in the Humber Region.

- Qualified and Experienced Staff
- Local Knowledge
- Door to Door Service
- Excellent Property Standards

[www.riverside-property.co.uk](http://www.riverside-property.co.uk)

Tel: 01482 322411

## nightel

Why should you choose Nightel Express for your stay in Hull?

- Newly refurbished rooms
- Excellent price
- Great location
- Free hot breakfast
- Free wifi



[NIGHTEL.CO.UK](http://NIGHTEL.CO.UK) | [INFO@NIGHTEL.CO.UK](mailto:INFO@NIGHTEL.CO.UK) | 0845 838 4783



## Northern Divers [Engineering] Limited

The UK's Leading Underwater Services with over 50 years' experience 1963 - 2015

Fully certified to undertake operations to a depth of 50m

- INLAND / COASTAL WORK UP TO 12 MILES OFFSHORE
- 24 HOUR EMERGENCY SERVICE
- WIND FARM OPERATIONS
- CONFINED SPACE AND RESCUE
- TOWER ACCESS AND RIGGING
- DECOMPRESSION CHAMBERS
- NITROX DIVING CAPABILITIES
- CALL-OFF DIVING AGREEMENTS
- SCOUR PREVENTION
- SALVAGE



[www.northerndivers.co.uk](http://www.northerndivers.co.uk)

# THE HUMBER – THE INTERNATIONAL GATEWAY FOR OFFSHORE WIND LOGISTICS

Currently experiencing brisk growth and an economic revival, the Humber region is building on its rich maritime heritage and emerging rapidly as the UK's Energy Estuary, an international hub for energy and renewables.

As home to the country's largest, multi-purpose ports complex, the region is experiencing significant growth in offshore wind, thanks to its proximity to a third of the country's designated major windfarm development zones. This prime position is attracting some of the world's biggest energy companies to the region.

Over £700million is being invested through Siemens, Able, ABP and the development of Green Port Hull. By 2020, DONG Energy will have invested £6bn in the world's largest offshore windfarm too – which is also in the Humber region.

## CAPITALISING ON THE HUMBER'S STRONG POSITION

With some of Humber's ports being 12 hours sailing time from three major Round 3 windfarms in the North Sea, it makes it the ideal base for transporting wind turbine blades and other parts manufactured in the region. Therefore, there is a pressing need for skilled workers to handle the logistics required in the wind energy sector is vital.

In order to maximise the potential in the thriving Humber region, the Grimsby Institute and the Humber LEP have joined forces to create Modal Training. It will ensure that businesses operating in the ports, energy and logistics sectors have access to the training support they need. Modal Training intends to work with them to develop their existing teams, train new members and raise the profile of career opportunities in logistics for the wind energy sector to facilitate future recruitment in this growing industry.

Once in full operation in early 2017, Modal Training will enjoy an ideal location in Immingham, on the south bank of the Humber. Until now businesses and their employees have had to travel to access this specialised skills training. Now it's available in the Yorkshire and Humber region. Not only will it help businesses in this area benefit, but Modal Training will serve companies from across the UK and internationally.

## INVESTMENT IN WORLD-CLASS SIMULATOR TRAINING

Modal Training's new £7million centre of excellence will be located in a 5,696 m2 bespoke designed facility, equipped with state-of-the-art simulators for training maritime crew and crane drivers. This is the perfect solution for those who will be working portside and at sea in dangerous conditions.

Simulation training is safe, effective and cost efficient, and gives those who will be working in offshore wind locations the vital skills required. It enables users to gain experience of a variety of cranes and offshore vessel operations, including movement of supplies and equipment from portside to vessels, from vessels to rig, and the subsea lifting and installation of equipment. Learning these operations would take years in the workplace, but can be achieved in just a few days in simulation.

When Modal Training fully opens in January 2017, in pride of place will be a full suite of Kongsberg advanced ship, offshore vessel, engine room and radar simulators.

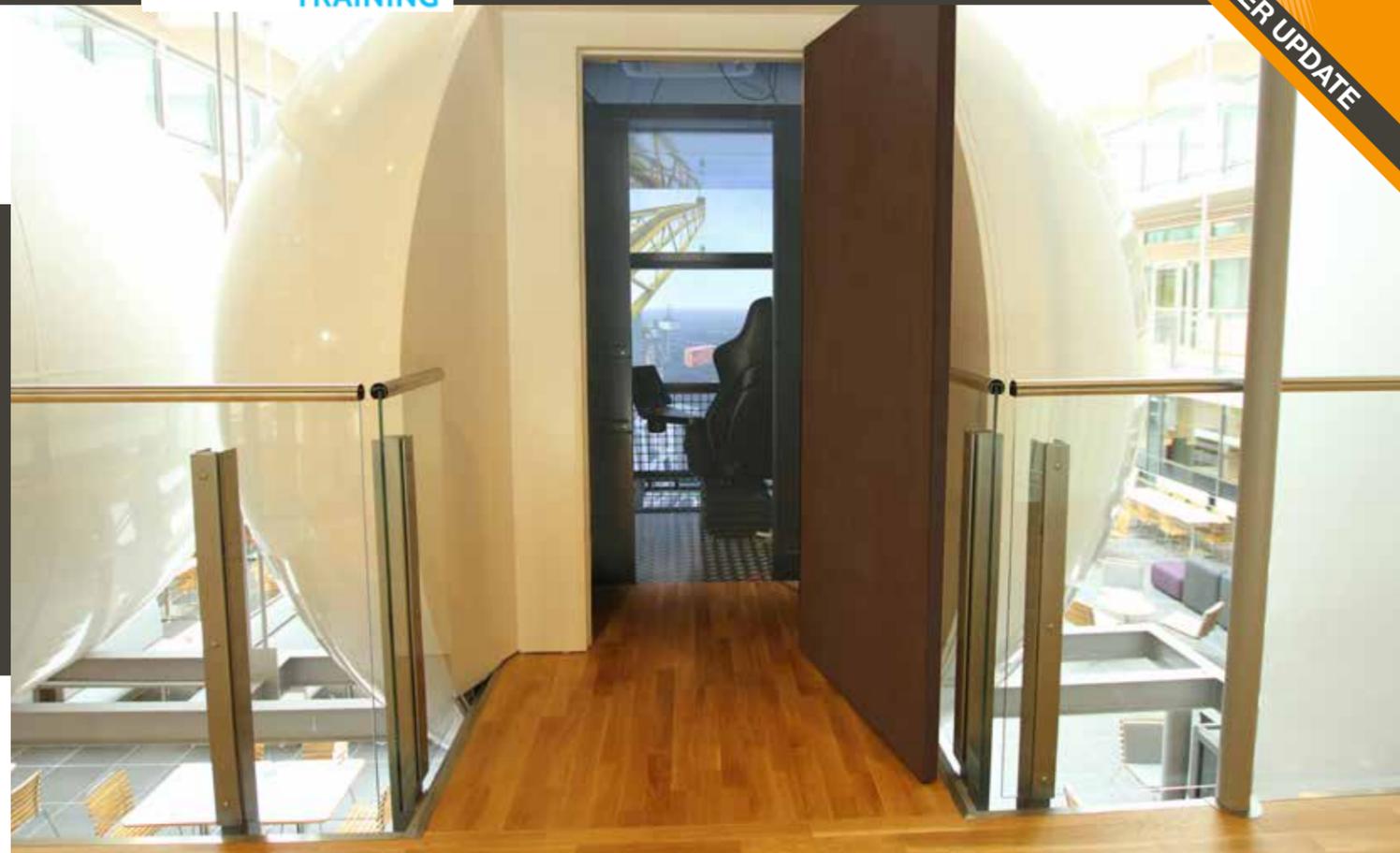
This will enable Modal Training to effectively replicate the working environment for a wide range of maritime roles, including bridge crews, navigators, maritime engineers and Vessel Traffic Service (VTS) operators. Each part of the simulator system will be able to be operated independently, or be interconnected to provide full vessel operation exercises for an entire crew.

## SIMULATOR TRAINING SUITES

The centrepiece of the simulation suite will be a Class A full mission K-Sim Offshore vessel simulator with forward and aft bridge, configured with a DP2 dynamic positioning system and anchor handling vessel hardware. The suite will also be equipped with two Class B K-Sim Navigation ship's bridge simulators, with one configured as a workboat/tug bridge.

Modal has also invested in a K-Sim DP Class C desktop simulator system for dynamic positioning training, and a desktop K-Sim Navigation configured for ECDIS radar training for up to six students. The engine room suite will be equipped with a full mission K-Sim Engine simulator, including the high voltage functionality, and a desktop engine room simulator. A K-Sim VTS operator simulator system will complete the new equipment line-up.

Modal Training has also appointed simulator specialist, Offshore Simulator Centre AS (OSC), to create a unique and sophisticated crane driver simulator training suite.



At the heart of the new suite will be two crane simulators housed in domes, each with seven projectors, capable of creating realistic training environments. There will also be six desktop classroom crane simulators, four deck personnel simulators, an instructor station and a debrief room.

## TRAINING TOGETHER

The suite will see individuals train to drive all types of cranes, across a wide range of portside and offshore operations. The simulators are designed to give trainees the skills and experience they need to work on all of these, as well as carry out turbine installation. Importantly, the crane simulators can also be used to simulate offshore ship's bridge and underwater ROV vehicle applications. This will allow whole teams of crane drivers, deck hands and offshore vessel operators to train together in a wide range of critical scenarios.

## Modal Training





# VISIONARY VESSELS WITH A DISTINCT DESIGN

Seahorse Marine relocated to Hull in 2010 from Western Canada. It brought to the city famed for its maritime and ship building heritage, a track record of designing and building commercial workboats, and supplying design consultancy to both international companies and government agencies.

## MEETING CUSTOMERS' OPERATIONAL REQUIREMENTS

The Seahorse workboat is designed to operate within environments that demand a stable and reliable working platform where minimal maintenance, reliability and safety are paramount. Constructed using high-density polyethylene (HDPE), the material provides tremendous strength and intact buoyancy without compromising versatility and durability.

Combining technology and a focused approach to quality, the company excels at adapting design and construction techniques to meet their customers' operational requirements within a competitive cost and build schedule.

## MATCHING INDUSTRY GROWTH

As the Humber renewable industry grows, so does the growth of Seahorse Marine's global customer base; fast crew transfer vessels (Marine Harvest, Scottish Seafarms), landing craft/survey support vessels (Van Oord in the Caspian Sea), patrol vessels (SEPA/African governments), dive support vessels and overseas passenger ferries, strengthening the company's reputation as the preferred HDPE workboat manufacturer.

## FROM STRENGTH TO STRENGTH

Moving from strength to strength, Seahorse Marine debuted summer 2016 a new vessel design; the Seahorse Sidewinder, a workboat offering increased stability, deck space, chime beam

and buoyancy. Responding to client requirements, the Sidewinder's hull design provides enhanced seakeeping ability without sacrificing crew comfort in the harsh open seas.

## SPECIFICATION

Designed as a practical vessel to meet multiple operational requirements using modular structures, bow options include a configuration to sit alongside turbine towers or a landing craft multi-category vessel, LOA <18m, and a beam of <3.5m. Fitted with Almarinjet's Intelligent Operation total propulsion control system, the Sidewinder is the first HDPE workboat to be fitted with the only twin joystick waterjet system.

## VERSATILITY

A simple and intuitive system, it makes manoeuvring effortless, whether travelling at speed in open water or positioning and maintaining the vessel in tight spaces for example, near turbine towers. With attainable speeds >32 knots it can perform fast response duties to return casualties to shore.

This positions Seahorse Marine as 'breaking the mould' in commercial workboat design.



Seahorse Marine

# GRASPING OPPORTUNITIES

## A continuing success story

Some 5 years ago, Tidal Transit was one of the first companies in the UK to take advantage of the opportunities presented by the development of windfarms in the North Sea. The North Norfolk company that started out as a charter fishing company, made a serious investment to take up the challenge of providing vessels to this nascent industry. It now charters purpose-designed boats and crews to both developers and operators of offshore windfarms.

## UK WATERS

Tidal Transit's Commercial Director, Leo Hambro comments: "There are 3 main hubs in the UK for offshore wind; Liverpool Bay, Lowestoft and Great Yarmouth, and the Humber Estuary. Since 2012 we have been working out of the Port of Grimsby, and have completed contracts with RES to service the met masts at Hornsea, Docking Shoal, Race Bank and Lincs offshore windfarms.

"We have also fulfilled contracts with Siemens and Dawson Energy working on the Westernmost Rough offshore windfarm."

## VESSEL CAPABILITY

Despite its vessels having the capability of working up to 150 miles out to sea, Tidal Transit's attention over the past five years has been focused mainly on projects that have been sited within 20 miles of the coast. But again working from Grimsby, Tidal Transit vessels have demonstrated their capabilities as longer distance support vessels which will be able to support the next round of offshore windfarms much further out to sea.

Amongst other contracts, Tidal Transit has completed five visits for 'met mast' monitoring equipment upgrades at the Dogger Bank and Hornsea offshore windfarm sites, both located far from the UK's eastern coast.

## GRIMSBY RENEWABLES PARTNERSHIP

With Grimsby becoming a key player in offshore renewable energy, the Grimsby Renewables Partnership has been

formed to offer advice and support to the expanding number of companies involved in this exciting new industry.

Leo Hambro concluded: "We have been a member of the Grimsby Renewables Partnership since it was established, and have recruited crew members from the local community. I look forward to the day when there is a facility similar to Lowestoft's Orbis Energy, which provides hot-desk and virtual office accommodation to companies that work in the offshore energy industry."

## Tidal Transit



# MOVING THROUGH THE AGES

The shipping industry has seen many significant changes over the years and Hutton's has evolved with them.



For over 180 years the company has been a key player in the Hull & Humber shipping industry building a reputation as a reliable provider of good value and quality products and services to ships calling at UK ports.

Starting over 180 years ago as an ironmonger to now the UK's leading ship supplier.

## LOCATION

The company's tailor-made premises are located less than 10 minutes from Green Port Hull with direct access to the Humber Bridge, UK motorway network and gateway to Europe. From here

they provide a vast range of stock and support services.

## STATE OF THE ART FACILITIES

- 3000m2 modern purpose built warehouse including 4000m3 capacity freezer and 5000m3 capacity chiller
- Storage facility of a secure 1hectare yard
- Supported by a fleet of temperature controlled vehicles ranging from 3.5tonne to 44tonne
- Daily delivery service supplying over 100 vessels per month on the Humber

## PRODUCTS & SERVICES

- Operating 24/7 365 days a year service
- Range of stocked products provided from their facilities include provisions, medical, technical, industrial and UK stockist of Wilhelmsen/Unitor.
- Centralised head office for operations sales, finance and procurement have developed a robust local customer/supplier network that are highly adaptable to suit your offshore supply requirements.

Expansion into new areas has developed the Huttons Medical division, embracing the 'one-stop-shop' approach, they are the only licensed chandler to provide a wide range of medical supplies, equipment and services to meet the shipping industry's needs and legal requirements.

## UK DISTRIBUTION

The company's branches are strategically located to ensure comprehensive coverage for existing and future windfarms stretching from North East UK to the South West UK.

## Hutton Group



# WHEN IS A WIND TURBINE NOT A WIND TURBINE? WHEN IT'S A PIECE OF CARGO

McAusland & Turner explain the reasoning...



Albert Weatherill



plan for a vessel. In one extreme example we found that the actually height of towers was greater than the depth of the tween deck of the vessel! Not an ideal situation if you can't close the hatch covers.

### LIFTING AND STORAGE

We also find that the absence of the marking of centre of gravities cause enormous problems when lifting large, heavy items like nacelles. The positioning of the lifting equipment is critical to avoid unexpected lateral movements particularly if a vessel has developed a partial list and the sea fastenings have not been removed completely.

With regards to storage we often find that the lay-down areas for components do not meet the recommended guidelines of the manufacturers. This can cause delays and slows progress with discharge operations.

### ALLEVIATING PROBLEMS

In order to help alleviate these problems, manufacturers and underwriters need to involve surveyors earlier than is currently the norm in order that likely issues with cargo can be addressed.

At the end of the day ships are ships and cargo is cargo. Applying proper practices of good seamanship with advanced product knowledge will help to minimise damages and delays when shipping WTG components.

**McAusland & Turner**

sometimes with gaps in the advice given to all parties involved in their carriage and storage.

### WIND TURBINE TOWERS

As an example wind towers are usually declared as per their greatest diameter however, for the purposes of carriage and stowage they are fitted with a supporting frame. This obviously adds height to the piece which may not have been accounted for when drawing up a stowage

This is not as silly a statement as it may at first appear. We conduct many warranty inspections on WTG components both in the UK and overseas and regularly come across the same problems time and again.

WTG components leave their places of manufacture as components. Whilst that is correct when they arrive at the side of the vessel they need to be viewed as just another piece of project cargo. Unfortunately, components often arrive with incorrect measurements declared, centres of gravity not marked and

# OFFSHORE PROJECT SUPPORT MORE THAN A SHIPS AGENCY

Arthur Smith (Grimsby) Ltd has developed over the last decade from a port-based commercial Ships Agent and Freight Forwarder into an offshore project and wind industry support specialist.

### KNOWLEDGE AND EXPERIENCE

2016 marks the 80th anniversary of the company which, over four generations, has provided reliable and efficient ships agency, stevedoring and logistics services. Their knowledge and experience has been utilised and adapted on a number of offshore construction and windfarm projects.

The first major windfarm involvement came with being appointed agents for the 145m hotel vessel Regina Baltica on Sheringham Shoal OWF including 24/7 infield support and all aspects for port calls at Harwich including logistics, stores, waste disposal, laundry, container hire and engineering work, from mobilisation to demobilisation.

The company's flexibility, commitment and industry knowledge has been applied to numerous windfarms for a variety of clients. Involvement has ranged from crew movements and PPE allocation for Seajacks on Humber Gateway, ships agency for survey companies to more extensive operations.

### TETNEY SEALINE REPLACEMENT

In 2015, the 50 year old oil pipeline from Tetney Monobuoy to Phillips 66's Tetney Terminal was replaced by Van Oord. With no access from the shore everything had to be supplied via the Humber. Assistance started with Harbour Master Humber liaison, planning vessel activities and beaching the large work barges. Arthur Smith also set up 24/7 stevedoring services and support from a terminal at Royal Dock, Grimsby for more than a dozen vessels used on the project. A complete logistics, storage and ships agency solution allowed both Van Oord and P66 to concentrate on the engineering work at hand and deliver a successful project.

### RACE BANK EXPORT CABLING

During 2016 the company supported Jan de Nul on the installation of the export cable for Dong Energy's Race Bank offshore windfarm. Over 40 vessels have been covered in The Wash, King's Lynn,



Sutton Bridge, Lowestoft, Immingham and Grimsby. Planning meetings and local Harbour Master liaison have been carried out, and waste disposal, bunkering, logistics, guard vessels, towage and landside crew movements organised.

The desire to use the considerable knowledge of the company to bring greater efficiency and reliability to offshore construction and windfarm project logistics has brought further clients this year including assisting DeepOcean at Grimsby on the inter array cables for Race Bank.

**Arthur Smith (Grimsby) Ltd**

# COMPLETE SHIPPING AND LOGISTICS SERVICES



Danbrit Shipping provide complete shipping and logistics services to the wind energy sector. Combining experiences of more than 50 years and many wind energy projects, the company aims to support offshore and onshore developers, vessel owners, contractors (EPC's), installers, fabricators, equipment manufacturers and operators & maintenance (O&M) service providers.

### BESPOKE SERVICES

Established for almost 30 years, based on the Humber, also provides bespoke Shipping and Logistics services, including extensive project cargo solutions, ships chartering, project chartering, agency services, stevedoring & port logistics and general/heavy & abnormal load haulage, to clients across the globe within many sectors as well as offshore oil & gas/renewables.

### INDUSTRY GROWTH

More recently they have seen an increase in orders from the on/offshore wind sector originating from turbine transportation, installation and O&M, which has resulted in supplying various services ranging from heavy shipping and haulage, to crew changes and vessel provisions and they are ideally located for major Round 3 projects.

In addition to project cargo services the company also handles general haulage and have over 100 curtain sided vehicles, within the group, operating around the UK.

**Danbrit Shipping**

# SPECIALISING IN UNIQUE SOLUTIONS

For almost 40 years WWL ALS UK International Limited's knowledgeable and experienced in-house teams have prided themselves in providing clients with one local point of contact, specialising in unique solutions for oversized, abnormal and difficult cargo shipments by road, rail, barge or charter vessel across a range of sectors nationally and internationally.

## MULTI-INDUSTRY OPERATOR

The Company's dedicated in-house teams understand the clients' needs providing a service that reflects the professional standards demanded in the business world today and can manage mobile or static cargo for a range of industries including: construction and plant, mining, tunnelling, marine, oil and gas, rail, engineering, power and renewable energy industries.

## GLOBAL REACH

Project solutions include worldwide break bulk, charter/part charter, heavy lift vessels, ro-ro, containerisation and a UK ships and port agency service.

The team work with clients from the initial proposal through to the contract stage, providing outline feasibility assessments and budget costs when bidding for new business.

## SUPPORT SERVICES

The dedicated chartering team is fully supported by an extensive database of ships' positions worldwide, enabling rapid solutions in sourcing the most suitable vessel for the cargo at the time and place to suit the clients' requirements. WWL ALS is able to provide additional worldwide services which include...

- Any size dry-cargo tonnage (not limited to break bulk carriers), multi-purpose, reefer, ro-ro and heavy lift tonnage
- Full or part load shipments
- Voyage chartering, time-chartering, period charter, bareboat contracting
- Freight covers, contracting, project-engineering
- Sale and purchase of ships
- Towage (wet and dry) or FLO / FLO operations
- Freight consultancy, market information



90 metre long convoy from UK destination US Gulf of Mexico

## OPERATIONS DEPARTMENT

The operations department provide clients with a debrief after the shipment has arrived and can manage the entire operation of vessels and voyages including...

- Preloading preparations, including stowage plan and super interagency
- Cargo clearance, custom arrangements, documentation work
- Arrangements and supervision of stevedoring operations
- Instructions to master and agents
- On/off hire surveys
- Liability insurance
- Vessel performance control on speed, bunker consumption
- Weather-routing
- Disbursement accounts, hire calculations
- Bunkering arrangements at lowest market prices
- Conducting all correspondence and liaison with owners/shippers on the client's behalf

## INTERMODAL TRANSPORTATION SERVICES FOR ABNORMAL LOADS AND HEAVY EQUIPMENT

As heavy machinery and equipment becomes more and more sophisticated the company's operational teams recognise that every transportation requirement is unique. It requires specialist knowledge and attention to detail to ensure that the most

secure and effective movement is provided to satisfy the client's requirements.

Experienced operators are available to provide help and advice for domestic, international and worldwide heavy haulage requirements including...

- Multimodal transportation solutions by: road, rail, air and water
- Ship chartering: full and part
- Turnkey project management
- Job site transportation
- Planning, supervision and representation services for FOB projects / shipments
- Crane planning, hire and management
- Contract services team
- Major / special projects: advice and management in major projects
- Specialist installation, erection and decommissioning services
- Pre project logistics planning, survey reports and feasibility studies
- In house permits and escort service: escort cars, police escorts, attendants, authority notifications
- Insurance: all levels of insurance can be arranged
- Security and bonded warehousing

## WWL ALS



Hutton's Group provides a wide range of marine supplies and services to the shipping industry covering all UK ports. Operating 24 hours a day, 365 days a year, our state-of-the-art facilities offer a full range of products and services to meet your needs.



T +44 (01482) 324093 E sales@huttons-chandlers.com  
**www.huttons-group.com**



Fleet Operations & Maintenance of Round 3 Wind Farm Service Vessels



make us your first call  
**+44 (0) 1485 518760**

email : charter@tidal-transit.com  
TIDAL TRANSIT, Docking Workshops  
Station Road, Norfolk PE31 8LT  
**www.tidal-transit.com**



**THE UK'S FIRST CENTRE FOR MULTI-MODAL LOGISTICS TRAINING**



Accelerated learning in realistic, simulated environments

**SEA • ROAD • RAIL • AIR • SUPPORT SERVICES**

Call today - T 01472 311222 ext. 1184 W [modaltraining.co.uk](http://modaltraining.co.uk)



WALLENIUS WILHELMSEN  
LOGISTICS



ABNORMAL LOAD  
SERVICES



Introducing Wallenius Wilhelmsen  
Logistics Abnormal Load Services



Project Cargo Agency Port of Hull



Renewable Energy Projects



New ro-ro ramp for Port of Grimsby



Worldwide Freight  
Management



Project Forwarding  
and Chartering



Abnormal Loads  
& Forwarding



Supply Chain  
Solutions



High & Heavy  
Construction Equipment  
Logistics