



Swaffham firm to construct onshore base

The main contractor for the construction of the onshore operational base for the Sheringham Shoal Offshore Wind Farm will be the North Norfolk operations of Mansell Construction Services Ltd.

Part of the global Balfour Beatty Group, Mansell is based at Swaffham's Ecotech Innovation and Business Park and employs a total of 100 people. The firm will utilise a number of sub-contractors, primarily locally based firms with experience in the type of functions required.

Scira Offshore Energy's base, to be located three miles south of Wells-next-the-Sea, will be a state-of-the-art construction eventually housing the

50 strong wind farm operation's team, which includes the Siemens wind turbine technicians who will head offshore daily to maintain the 88 turbines at the 317MW wind farm.

Designed by Norwich based LSI Architects, the base will include an office, warehousing, a service yard, landscape gardening and adequate parking for staff and visitors.

Initial preparation works at the 0.97 hectare site (2.39 acres), located on the Walsingham Estate in Egmere, involved the diversion of existing powerlines, which were replaced with underground cables to enable utilities and services to be brought on to the site. Completed in February, this work by UK Power Network will also enable Mansell and its sub-contractors safe site access.



Architect impression of the completed facility, three miles south of Wells-next-the-Sea.

Scira General Manager, Einar Strømsvåg said he is pleased to announce the contract with Mansell as the firm understands the Norfolk area and has shown a commitment to developing long-term partner relationships and to delivering quality results on both refurbishment and new build projects.

Initial groundworks

"Site offices will shortly be set up and construction will start with highways work and initial groundworks followed by the building foundations, drainage and erection of the frames," he said. "Once this work is underway we expect the base will rapidly begin to take shape with completion scheduled for late 2012."

"We intend to start to move out of the temporary offices in Polka Road, Wells-next-the-Sea and into the newly constructed facility by the end of this year."

Mansell Regional Managing Director, Dean Burgess said that the company was privileged to have been selected by Scira as the construction partner for the onshore operational base.

"This project enables us to continue our commitment to the sustainable and renewables market at a local level with a multinational partner," he said.



Mansell Senior Project Manager Neil Smith (left) and Site Manager David Rydlewski (right) on site with Scira's Einar's Strømsvåg and Anita Holgersen.

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Wind farm progressing with new vessels



Around 100 workers call the Regina Baltica home during their typically two week long shifts.

A new wind turbine installation vessel arrived on site at the wind farm in March to help catch up on delays to the 317MW project's forecast schedule following a period of unseasonably poor weather.

A total of 38 turbines of the 88 Siemens 3.6MW turbines are now in place, with 10 commissioned and transmitting power to the national grid.

Great Yarmouth based

The state-of-the-art, self-propelled 76m jack-up vessel *Seajacks Leviathan*, owned by Great Yarmouth-based firm Seajacks and operated out of the local port, has been contracted until late July.

The wind farm has been generating power since the start of August last year, however progress has been slower than anticipated due to the weather conditions and rough seas, which were significantly worse than usual in the Greater Wash this winter.

The *Seajacks Leviathan* has joined the 76m *GMS Endeavour*, a technically similar turbine installation vessel, with both carrying two turbines at a time from Great Yarmouth to the site. She replaced the 91m purpose-built jack-up barge *Sea Jack* that has moved to another offshore wind farm development after four months on the Sheringham Shoal project.

The *Seajacks Leviathan* has significant turbine installation experience having

worked on both the 140 turbine 500MW Greater Gabbard project off the Suffolk and Essex coast and the 102 turbine 367MW Walney Offshore Wind Farm in the Irish Sea. She complies with the most stringent safety and quality standards and can operate with a significant wave height of 1.5m and when wind is up to 12 metres per second.

Meanwhile in March, the Greater Wash saw the departure of the vessel *Smit Constructor*, which worked primarily carrying out secondary works – installing j-tubes, bellmouths and rock bags – preparing for cable installations. The wind farm stalwart has completed the works and moved to a new assignment.

The *Team Oman*, another long term member of the Sheringham Shoal fleet, has also departed having completed the installation of the infield cables. (see story opposite). Meanwhile the *Toisa Warrior* will continue to be seen on site for the coming months as the infield cables are buried and work on the export cable, from the wind farm to shore, is completed.

Converted cruise ferry

As well as newcomer *Seajacks Leviathan*, the Sheringham Shoal site has welcomed a second major vessel with the arrival of a new floating hotel for wind farm construction workers.

Replacing previous "floatel" the 153m *Wind Ambition*, which was required

elsewhere, the latest addition to the Sheringham Shoal fleet is the 145m *Regina Baltica*, a former cruise ferry.

She has been contracted for at least six months to act as a temporary home to the workers who will install and commission the remaining wind turbines and electrical infrastructure at the wind farm.

Around 100 workers at a time are based on the vessel during their work rotas. They are able to take advantage of the facilities that include single-berth cabins, cafeteria, restaurants, conference and meeting rooms, lounge areas and a sun deck.

Project Director Rune Rønvik said that the use of a well-equipped floating hotel alleviates the pressure on local towns to continuously accommodate such a large shifting workforce while ensuring those working on the wind farm are well catered for as they carry out their respective tasks.



Seajacks Leviathan joins the project.

Cable guys finalise infield installation

The strings of undersea cables connecting the turbines to the offshore substations are now fully installed and once connected, will be ready to transport the power produced by the Sheringham Shoal wind turbines as they are put in place and commissioned.

A total of 56 kilometres of cables has now been installed by contractor Visser & Smit using the 86m vessel *Team Oman*, which has been working on and off in the Greater Wash for more than 18 months.

There are two different types of these cables – type one which connects the turbines closest to the substations, and type two which connects the turbines further out.

On each voyage from the Nexans factory, in south-eastern Norway where the cables

were produced, to the site, *Team Oman* transported a huge carousel of the cables, which bundled together comprise three internal electricity wires plus fibre optics.

Working on 24-hour rotations, around 50 personnel have been involved in the cable installation. A remotely operated vehicle (ROV) pulls the cable from the carousel, along the seabed to the base of the foundation, where it is fed into the



Team Oman, a Sheringham Shoal stalwart, lays the final cables.



Laying the infield cables.

waiting polyethylene pipe, through the funnel-shaped bellmouth and up j-tubes – the conduit which forms part of the yellow transition piece.

A winch placed on the top of the transition piece pulls the cable into place before it is temporarily clamped awaiting the arrival of the termination team from Electricity Distribution Services, who connect it to switch gear before the arrival of each turbine.

Although all the infield cables have been laid, the cable teams have one final task which is to trench and bury the cables into the seabed to ensure they are protected from fishing gear, vessel anchors and other potential hazards.

The 87m *Toisa Warrior* will continue to carry out the cable burial work, with completion expected to be by summer this year.

Turbine film now on website

The latest film of the wind farm's construction works – installing the turbines – which includes footage from inside the turbine as it is erected and time lapse shots of the blade being attached, is now available for viewing on the website – www.scira.co.uk.

Lowestoft-based video production company CHPV Media has been following the progress of the project since the first work started in June 2010 and a whole series of films, each covering a stage in the construction process, is now on the web.



The film shows the blades being attached one at a time in a precise operation.

Wind farm in watercolour

Norfolk watercolourist, John Hurst who specialises in capturing the area's maritime heritage as well as local landscapes turned his attention to the Sheringham Shoal project as an example of maritime history in the making.

He has produced two stunning watercolours, which started life during a 12-hour stint on a vessel usually used for personnel transfer. The highly original works – both featuring the turbine installation jack-up vessel 'GMS Endeavour' – were completed later in his Salthouse studio.

Quality watercolour prints and greeting cards have been produced from both the paintings and are now available for sale to raise funds for the Wells Maritime Trust. Both the prints and cards can be purchased from the shop at the Mo, home to the Sheringham



Norfolk artist John Hurst with one of the paintings.

Shoal Wind Farm Visitor Centre, from the Wells Harbour office and via www.marshlandarts.co.uk.

Scira purchased the original paintings for display in its new operations and maintenance base that will be constructed this year.

Questions from the community

How do I get a job with Scira?

Scira's web developer, Wells-next-the-Sea based Trickyweb has recently updated the company website – www.scira.co.uk – and it now features an employment opportunities page enabling speculative applicants to upload their curriculum vitae and express their interest in working with the company. There is also a current vacancies page advertising any Sheringham Shoal job opportunities, with Scira or its main contractor Siemens.



People interested in working with the wind farm can now register their details online.

What is the energy payback time for the wind farm?

A comprehensive life-cycle analysis of the wind farm has been undertaken by Statoil's research department and is currently undergoing third-party verification so the results will be published once that report has been finalised. However another report on the life-cycle and carbon payback of wind turbines themselves indicated a payback time of between six and nine months, depending on the type of turbine. This means that, assuming a technical lifetime of 20 years, a turbine could return more than 25 times more energy back to society than the fossil inputs required for construction, operation and decommissioning, including recycling.

If you would like a question answered in the next newsletter, please email info@scira.co.uk

Grant application process simplified

Applications for Sheringham Shoal Community Fund grants have been simplified to make it easier for those wishing to send in a submission.

Scira General Manager Einar Strømsvåg said the fund previously had two closing dates per year for those submitting proposals, however this has been amended to make it easier to apply for funding at anytime.

"It is also now possible for interested groups to submit just an outline or summary proposal to gain some

feedback and guidance before they spend time and effort working on their full application," he said.

Outline proposals will be assessed and applicants with promising initiatives will be invited to then submit a full proposal for consideration by the grant panel. Full applications are normally considered at meetings twice a year with the next scheduled for May 2012.

If you would like to find out more or submit an outline proposal form, you can visit www.norfolkfoundation.com for details.

Contact details and more information

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The Sheringham Shoal Offshore Wind Farm is owned equally by Statoil and Statkraft through the joint venture company, Scira Offshore Energy Limited. Statoil is the operator for the project during the development phase and Scira will be the operator of the wind farm when completed.

