Issue 6 October 2016

Newsletter

Rampion Offshore Wind

Jack-up vessel *MPI Discovery*

Welcome to our sixth newsletter

Construction work on the Rampion project is now well underway and inside this edition you will find updates, including news about the progress of the onshore and offshore works, our new apprentices and community support activities.

Construction gets underway

After six years of planning and development, and having achieved consent, construction of the Rampion Offshore Wind Farm kicked off in autumn 2015. It started with onshore cable route works in September with contractor Carillion preparing the cable corridor working width, then undertaking topsoil stripping, trenching and duct laying at locations along the 27 kilometre (km) route. Contractor ABB started work on the onshore substation with civil and enabling works at the site followed by the mechanical and electrical build that will continue into early 2017.

Offshore construction got underway in February 2016 with the installation of the first foundation by jack-up vessel ***MPI Discovery***. Ongoing offshore support activities have included boulder clearance and relocation, various pre-construction environmental works and unexploded ordnance surveys. Foundation piling was paused from mid-April until the start of July, in accordance with consenting conditions, to protect black bream nesting at the Kingmere Marine Conservation Zone. It is scheduled for completion during the winter.

The Rampion team managing the construction of the wind farm has moved into a temporary facility at Newhaven Port, which will be home until the specially-designed operations and maintenance base is completed. The new permanent base will first be used as the main project management hub before the operations team, comprising approximately 60 full-time, permanent staff, move in and take over the long-term running of the wind farm.

Crew transfer vessels at Newhaven Port

Rampion's first two apprentices, Tony Walker and Ross Muirhead

Apprentices get on board with Rampion

The construction of Rampion Offshore Wind Farm is a huge endeavour with hundreds of employed personnel and consultants working both directly with E.ON and their contractors. However it is operations and maintenance roles that present the longer-term career opportunities, with the base set to employ approximately 60 people to run the wind farm day-to-day.

Wind turbine technicians will be a significant part of the workforce and it has been the goal for apprentices to fill up to 25 per cent of the newly created technician positions. The first two apprentices, Tony Walker and Ross Muirhead, started training in September 2015 and will be ready when the wind farm is in operation. Two more apprentices, Sussex locals Alex Reah and James McMillan, both started last month, and another two will be recruited next year.

Alex said: "I believe renewable energy is a vital part of our commitment to reducing climate change and something I've always supported. To be a part of one of the largest offshore wind farms in the world, based off the coast of my home town, is a privilege."

James said: "I am looking forward to joining Rampion because it will allow me to play a role in the future of energy while learning interesting new things."

The apprenticeships include almost two years' training at the Uniper Academy in Nottingham where apprentices will gain their Business and Technology Education Council qualifications, followed by another two years' practical wind farm experience to achieve their National Vocational Qualifications.

Operations manager Pete Andrews said: "The training is extensive and thorough so by the time they have finished, the apprentices are highly experienced and well-prepared to take on their roles as wind turbine technicians."

Community support

Getting the rafters paddling

Rampion Offshore Wind Farm provided vital funding to support the 41st Round Table, Lewes to Newhaven Raft Race in July that was held in aid of Blind Veterans UK.

The wind farm will be run from Newhaven Port so this was an initial introduction to the local community it hopes to be an integral part of.

Winners of this year's raft race with (right) Newhaven Town Mayor, Steve Saunders and (third from right) Rampion's Marcus Moore

Construction site manager Marcus Moore said:

"Rampion Offshore Wind was proud to support the Lewes Regatta and Raft Race to Newhaven. Newhaven Port is the base for our construction facilities and will be our long-term operational home too so it was a natural fit for us, as well as being a lively event supporting a great cause."

Supporting music in Sussex

Rampion Offshore Wind joined Brighton Dome as a sponsor this year to support the music programme at Brighton Festival, as well as music at the venue all year-round.

Rampion's Chris Tomlinson said: "It was fitting to be able to celebrate the success of the Brighton Dome and Festival's history during its 50th year, while also looking forward to a clean energy future with Rampion generating electricity for the equivalent of around four in ten Sussex homes for the next 25 years."

Getting in touch

You can contact us using the details below:

Freephone: **0800 2800 886**

Email: **rampion@eon.com**

Website: **rampionoffshore.com**

What's been happening onshore?

The construction of the onshore cable route started predominantly in the southern area near Worthing and Lancing, working north towards Twineham and Bolney. Initially work focused on creating vehicle access points and haul roads along the cable corridor working width, so construction traffic could be rerouted off the local roads.

Preparation for the offshore construction works started following establishment of the access points and haul roads, work has continued along the cable route with the removal of topsoil and the digging of two trenches for the installation of the cable ducting. These trenches are back filled with the subsoil once the ducts are in place. The cables can then be pulled through the ducts and the surface reinstated.

A different methodology was introduced at the Tottington Mount section of the cable route due to its steep gradient and the thin topsoil on special chalk grassland. A specific trencher was used employed as well as a turfing machine to remove and replace the turf. This work has now been completed and monitoring of the reinstated chalk grassland will continue. Royal Botanic Gardens, Kew was closely involved, with seeds from the area harvested to be kept in their seed bank should they be needed to reinforce the grassland in the future.

Ducting ready for installation


Horizontal directional drilling underway

Landmark drilling complete

A technique called horizontal directional drilling (HDD) has been used to install cable ducts under four key landmarks along the cable route - the A27, River Adur, railway line, and the A259 and Lancing beach.

HDD was used rather than open trenching to ensure traffic and trains could keep running and the beach could stay open. The final HDD, under the A259 and Lancing beach was completed in early August from a construction site at Brooklands Pleasure Park.

The drill exit was located into the sea approximately 70 metres (m) beyond low tide and the 50m long vessel, ***Stemat 63***, was anchored off the beach to assist with the offshore part of the drilling. Two 450m sections of duct were towed to the drill exit location, before being pulled through the drilled sections back to the Brooklands construction site.

The 90m long cable laying vessel, ***Stemat Spirit*** will return in later in the year to bring the cables that will be pulled through the ducting.

Preparing for a new substation

Rampion's new onshore substation will convert the electricity generated by the wind farm to 400kV, so it can enter the national grid transmission system.

The seven-hectare site has now been cleared for the construction of the substation, and work on the foundations is well underway in readiness for the delivery of electrical equipment towards the end of this year.

Tree planting, to screen the substation as part of the agreed mitigation, is ongoing and low fences have been erected to protect newts and other wildlife by keeping them out of the site. These fences will be maintained throughout the construction of the substation.

Work is also underway on the underground cables that will connect the new substation to the existing National Grid substation at Bolney.


Trees are planted around the substation site

Archaeologists excavating at Tottington Mount

Archaeology along the cable route

At each stage of the cable route construction, archaeologists have been on site alongside the construction team, working to define and record any archaeological finds which may be exposed during the works. This has included representatives from Historic England, West Sussex County Council and the South Downs National Park Authority.

Late last year, archaeologists from local specialists Archaeology South East and Wessex Archaeology excavated a Bronze Age Cross Dyke at Tottington Mount. The below-ground remains were consistent with other cross dykes in the region, although distinctive pottery may provide dating evidence that with help to refine the understanding of the Bronze Age period.

Details and an analysis of the dig will form part of a full report on the historic environment, which will be produced and made available to the public when the onshore works are complete.

Communications with the community

Prior to the start of construction, four public information sessions were held along the onshore cable route with a total of around 500 people attending events at Henfield, Steyning, Lancing and Twineham. The exhibition boards from these events are still available on the website for anyone who missed out.

Since then, the onshore substation Local Liaison Group has been actively involved with construction planning and thousands of information letters have been sent to people living and working along the onshore cable route. One mailing resulted in changes to an HGV route to avoid the southern section of Ham Road, which was perceived as being too narrow with car parking on both sides. Further letters have also been sent out to residents prior to specific work being undertaken, for example before the horizontal directional drilling at Brooklands Pleasure Park. These have been distributed each time the project is about to undertake a major activity in a local area.

The Rampion Newsletter will provide project news and updates and anyone wishing to receive electronic copies can register their interest at **rampion@eon.com**.

Rampion has a new onshore stakeholder manager, Sue Vincent, who can be contacted with queries about the onshore construction works for both the cable route and the new operations and maintenance base by email **sue.vincent@rampionoffshore.com**. Chris Tomlinson continues to look after stakeholder engagement in relation to offshore works and the onshore substation **chris.tomlinson@eon.com**.

If you have any questions throughout the construction phase, you can also call our Freephone number on **0800 2800 886**.

New owners. New logo.

Rampion Offshore Wind

During 2015 two new shareholders were announced, joining E.ON as partners in the Rampion Offshore Wind Farm. The UK Green Investment Bank now holds a 25 per cent stake in the project and Canadian energy company Enbridge has a 24.9 per cent stake. E.ON will remain the majority shareholder with 50.1 per cent of the shares, and will manage the construction and operation on behalf of all three owners.

To mark the new ownership structure and the formation of Rampion Offshore Wind Limited, a new logo and brand for the wind farm has been launched. It is a stylised version of the Rampion flower, the county flower of Sussex, and uses its blue and purple hues in its colour. The Rampion name was the result of a public vote, won by Davison High School for Girls.

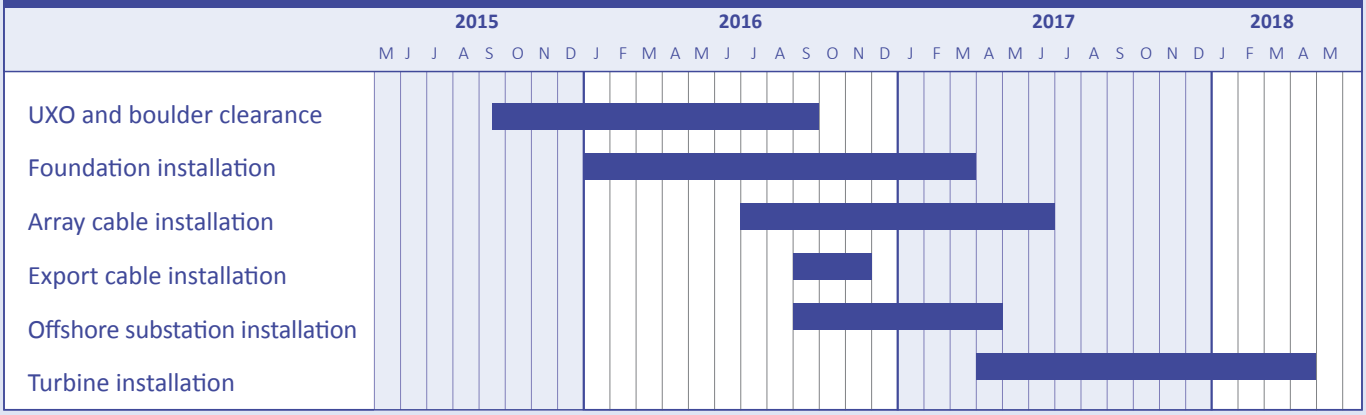
What's been happening offshore?

Preparation for the offshore construction works began in autumn 2015, initially with vessel-based surveys, to ensure the seabed was suitable for the foundation and cable installation and for the contracted jack-up vessels. The two jack-up vessels being used each have six extendable legs to raise themselves up and create a stable platform for the piling. So it was vital to understand the seabed strength and strata before they arrived on site to start installation.

Boulders that needed to be moved before construction activity could start were identified and an extensive campaign to relocate them was initiated. Unexploded ordnances (UXO) that needed further assessment were also identified.

Pre-construction ecological surveys for monitoring purposes were also undertaken, and will be repeated over a number of years once construction is complete to determine any changes to the environment and ensure the seabed has returned to the condition agreed with statutory authorities.

Indicative timeline for the offshore works



Foundation installation two thirds complete

The major activity of the past few months has been the installation of the foundations that will support the wind turbines. As of the printing date, 83 foundations had been put in place, as well as the jacket foundation for the offshore substation.

At the start just one vessel, ***MPI Discovery*** was used to collect the monopile foundations and transition pieces in sets of three from Vlissingen, Netherlands, sail them to site, install them at their specific locations before positioning the yellow transition pieces on top and sailing back to collect the next load.

The transition pieces support the wind turbine tower and also include the boat landings, ladders and platforms required to safely access the wind turbines during operation.

After the first six rounds of installation, work temporarily ceased due to the black bream restriction. When work re-started in early July, an additional vessel ***Pacific Orca***, which carries four sets of monopiles and transition pieces per trip, joined the ***MPI Discovery*** to increase the rate of installation.

The jacket foundation for the offshore substation was installed last month

Export cable-laying vessel off the coast

The wind farm team started work in August to trench a section of the seabed along the near shore export cable corridor in preparation for laying the cable ducts that will house the two parallel offshore cables, known as export cables. These are the cables that will carry power generated by the wind farm to the shore.

In autumn, the 90m ***Stemat Spirit***, will be visible to beachgoers along the coast as it lays the 16km export cables from the wind farm's offshore substation, along the seabed, then finally through the ready-installed cable ducts and under the beach and A259 to be jointed with the onshore cable at Brooklands Pleasure Park.

Controlled detonation of an unexploded ordnance along the cable route

Controlled explosions of two WWII bombs

During the earlier surveys two unexploded devices, thought to date from World War II, were discovered along the offshore cable route, 3km off Lancing beach and in a water depth of 13m.

The Marine Management Organisation granted permission for disposal, which was done by diving experts using controlled explosions in mid-August. Commercial and recreational sea users were informed of the work and a safety exclusion zone was monitored during the process.

The project's development manager Chris Tomlinson said:

"Once the bombs were discovered we worked with experts to determine the best and safest way to clear the site. Two routine controlled explosions were carried out clearing the way for the installation of the export cable later this year."

Sea user safety a priority

Sea user safety is a project priority and before offshore installation kicked off, an information session was held for sea users – local fishermen, charter boat owners and yacht and diving club members.

This event raised awareness of the work that was planned offshore, the type of vessels being used, the sailing routes and projected timeframes. They also emphasised the safety exclusion zones in place, and the processes adopted to ensure all sea users' safety throughout the construction period.

Chris Tomlinson took the opportunity at the events to remind sea users that this is a major construction site and will be congested with large vessels, long anchor warps and high-speed craft for the next two years.

Communications will continue throughout the construction period, with Weekly Notices of Operations (WNO) published to highlight the intended area and type of work, and the vessels that will be mobilised for the week ahead. The project will also issue Notices to Mariners (NTMs) to notify of new hazards.

Questions from the community

Q: Why have I sometimes heard the offshore construction works?

A: The Sussex coastline is a highly populated area and Rampion is a major construction project where construction noise may be heard occasionally. The first instance of multiple complaints we received about audible noise was from activity on 19 July and since that time we have closely monitored the issue to better understand the specific conditions under which the piling is likely to be audible at night and have taken action accordingly. This has included implementing a policy of self-regulation, delaying night-time piling operations until the following morning if we feel that conditions may cause audible noise. However this is a not an exact science and requires a number of highly complex factors to be balancedsuch as weather and atmospheric conditions, seabed geology, and the safety of our colleagues and contractors.

On 23 August, we received further complaints about piling noise disturbing residents' sleep in the early hours. In planning our activities the previous day we were aware forecast weather and atmospheric conditions may cause audible noise so we decided to complete piling early. However some operational issues extended the piling work which, for the safety of the installation vessel and all on board, must be completed once started.

This coincided with a change in wind direction, weather and ambient conditions that arrived earlier than expected and made the noise more noticeable.

We will continue to review conditions daily and suspend piling activity overnight if we see night-time forecasts similar to those when we have previously experienced complaints, that is, very warm weather and particularly low ambient background noise.

To minimise the impact on local residents, we will also schedule daytime piling of foundations at difficult locations in terms of seabed geology, which means the hammer energy needs to be increased.

If you have a specific question about the construction of the wind farm please get in touch **rampion@eon.com**