

PortNews

Covering the port area of Vlissingen, Terneuzen and Ghent



Offshore defines North Sea Port

Fifty years Euro-Silo

Stora Enso – A circular role model

Offshore Energy 2018 Amsterdam



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IN THIS ISSUE



4



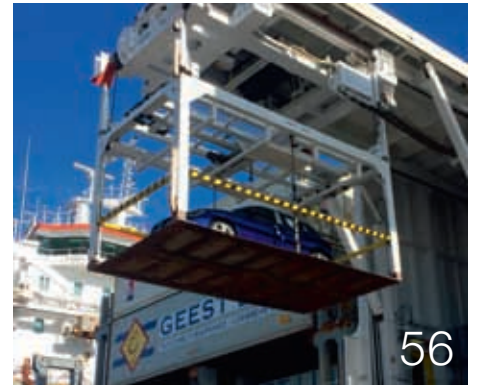
14



30



40



56



8

ENVIRONMENT & CULTURE

- 59 Delta Ride for the Roses
- 64 The new Port House in Ghent

INFRASTRUCTURE

- 40 KWS Aquavia

INSIGHTS

- 8 Daan Schalck, CEO North Sea Port
- 44 Perry Schot, Managing Partner at Force3 Offshore

LOGISTICS

- 34 Fifty years Euro-Silo
- 38 All Weather Terminal
- 52 Eight times the size of the Efteling's car park
- 56 Fast, direct and dedicated

O & M

- 14 A matter of good planning and communication

OFFSHORE

- 4 Offshore defines North Sea Port
- 6 Offshore track record
- 10 Built on experience

OFFSHORE ENERGY 2018

- 18 Previews

PROCESS INDUSTRY

- 46 Ten years of Alco Bio Fuel

SUSTAINABLE INDUSTRY

- 26 The green future of 'urban mining'
- 30 A circular role model
- 60 Pipeline infrastructure
- 62 Netherlands' largest solar park

REGULARS

WELCOME

- 3 Henk de Haas, Chairman ZPPC

BULLETINS

- 49, 55

PORT MAPS

- 66 Vlissingen, Terneuzen and Ghent

PARTICIPANTS

- 69 Overview

PUBLISHERS

- 72 About PortNews



Photo courtesy of maritimephoto.com

ON THE COVER

Zhen Hua 34 loaded with jackets for the East Anglia One offshore wind Project on its way to BOW Terminal.

EVENTS

North Sea Port and the Zeeland Port Promotion Council will be in attendance at various events and trade shows throughout the year. Below you'll find a snapshot of the upcoming events that might be of interest to you.

22-24 OCTOBER 2018	6-8 FEBRUARY 2019	19-21 MARCH 2019
Offshore Energy Amsterdam	Fruit Logistica Berlin	Intermodal South America São Paulo
		
26-28 MARCH 2019	2-4 APRIL 2019	15-17 APRIL 2019
StocExpo Europe Rotterdam	Wind Europe C&E Bilbao	TransRussia Moscow
		
7-9 MAY 2019	21-23 MAY 2019	4-7 JUNE 2019
Antwerp XL (Breakbulk) Antwerp	Breakbulk Europe Bremen	Transport Logistics Munich
		
4-6 JUNE 2019	11-13 JUNE 2019	3-6 SEPTEMBER 2019
Provada Amsterdam	TOC Europe Rotterdam	Offshore Europe Aberdeen
		
7-9 OCTOBER 2019	6-8 NOVEMBER 2019	26-28 NOVEMBER 2019
Offshore Energy 19 Amsterdam	Intermodal Europe Rotterdam	Wind Europe Offshore Copenhagen
		

“ Strengthening ties

Welcome

So far, 2018 is proving to be an excellent year for North Sea Port. The port authority recently released its cargo traffic and financial figures for the first half of 2018, and they confirm the positive trend of 2017.

The total amount of cargo traffic in the first six months of 2018 amounted to nearly EUR 12 million in net profit, surpassing expectations. This is a positive encouragement for the further development of the cross-border port area. Another sign of the port's strong current market position is the arrival of various companies within North Sea Port, some of which have already established themselves here, while others have announced plans to do so in the near future.

The arrival of these new businesses also led to an increase in new participants for Zeeland Port Promotion Council, which shows us the importance that companies in the port area attach to becoming an active member of the port community.

A few weeks ago, Zeeland Port Promotion Council hosted its half-yearly Port Lunch on board the Denick II, which sailed us around the port of Ghent. For many participants, it was a useful introduction to the port companies on the other side of the border, several of which were represented on board. As Chairman of ZPPC, I see the growing amount of cross-border contact between companies within North Sea Port with great interest, and am glad we can provide networking events to encourage this.

At present, I am looking forward to the Offshore Energy conference and exhibition, which will take place 22-24 October in Amsterdam. With over 600 exhibitors and 12,000 expected visitors, it will provide a great opportunity to highlight North Sea Port's leading role in the offshore



energy sector. With 26 companies from Zeeland participating in the exhibition, Zeeland will be well represented.

I look forward to seeing you there at the North Sea Port pavilion (booth number 1.800).

Henk de Haas
Chairman, Zeeland Port Promotion Council

Offshore defines North Sea Port



North Sea Port is the ideal home base for the handling, storage, construction, assembly, and delivery of offshore wind components. The huge jackets and transition pieces, as well as the many heavy lift jack up vessels, are visible from kilometres away from Vlissingen, as literal proof of just how defining offshore has become for North Sea Port.

Apart from the role that North Sea Port plays in the logistics of the new-to-build windfarms, the port is also an ideal hub for the increasing O&M activities. Although the port areas of Terneuzen and Ghent also attract business from this growing industry, the Vlissingen port area has made North Sea Port the true offshore champion. Its location is close to the North Sea offshore wind locations. Vlissingen is also easily accessible.

Large installation vessels can navigate freely, unencumbered by locks or bridges. This is especially important, as always, for this branch: time is money. Special ships are needed for transporting heavy loads and these vessels can only carry limited amounts of cargo each time. Rapid handling is therefore very important. Many wind generator parts are manufactured in the hinterland. Vlissingen is ideal for the temporary storage of these items such as monopiles, transition pieces, and jacket foundations, as there is ample space available. As offshore wind turbines are increasing in size, construction companies are also looking at production facilities closer to sea, facilities that Vlissingen can offer at existing terminals, as well as in greenfield areas.

Everything is available

Apart from the logistics companies providing the space and facilities required for efficient transshipment to windfarm projects, several companies are specialised in steel construction work such as jackets, topsides, transition pieces, blade racks, and grillages. The port area also has many options for (de)mobilising OSVs, for vessel repair,



NORTH SEA PORT HAS EVERYTHING REQUIRED TO FACILITATE THE BUILDING AND MAINTENANCE OF OFFSHORE ENERGY PROJECTS.

maintenance, refits, and conversion. Apart from this, ample service providers assist in a broad range of activities, including cable spool services, heavy lift operations, towage, and transport of crew and equipment. In short, North Sea Port has everything required to facilitate the building and maintenance of offshore energy projects.

Further expansion

More than 40 offshore windfarms have already proven that North Sea Port is Europe's number one port in the offshore wind industry and many projects for the oil & gas industry underline its reputation in that area. Recent developments indicate that the broad range of activities is further expanding. Ørsted decided to establish its O&M base in Vlissingen for its planned Borssele 1 & 2 offshore windfarm, and MHI Vestas started a hub in Vlissingen for transshipment, handling, storage, and assembly activities for offshore wind projects in the southern North Sea region. Oil & gas decommissioning and offshore wind turbine refit are other activities that are becoming familiar in the port area.

Willingness to collaborate

The success of the offshore cluster is also a result of the strong willingness of companies to work together, as everyone in the entire region realises that collaboration leads to a stronger market position. The platform Energy Port Zeeland in which North Sea Port participates, focuses on closer cooperation between government, educational institutions, businesses involved in training and employment, research and innovation, profiling and communication, and business development. The platform should lead to new activities in the offshore sector. One of the first results of the platform is the start of a new company named Offshore Wind Technicians, a joint venture aimed at creating a pool of experienced and trained people for building and maintaining offshore wind turbines.

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Photo courtesy of maritimephotography.com.

VLISSINGEN IS EASILY ACCESSIBLE AND ITS LOCATION IS CLOSE TO THE NORTH SEA OFFSHORE WIND LOCATIONS.

MORE INFORMATION

North Sea Port

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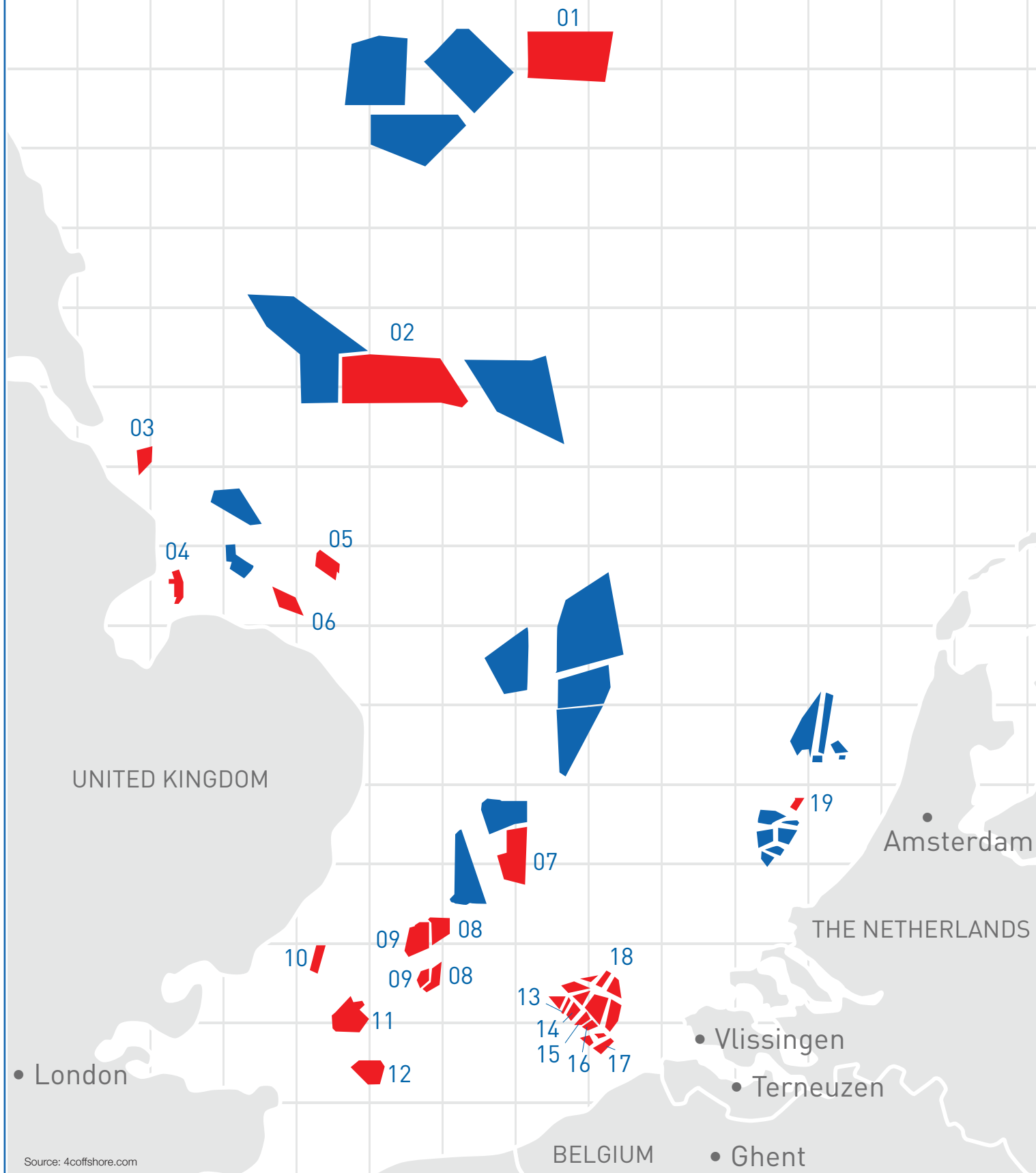
MORE INFORMATION

North Sea Port

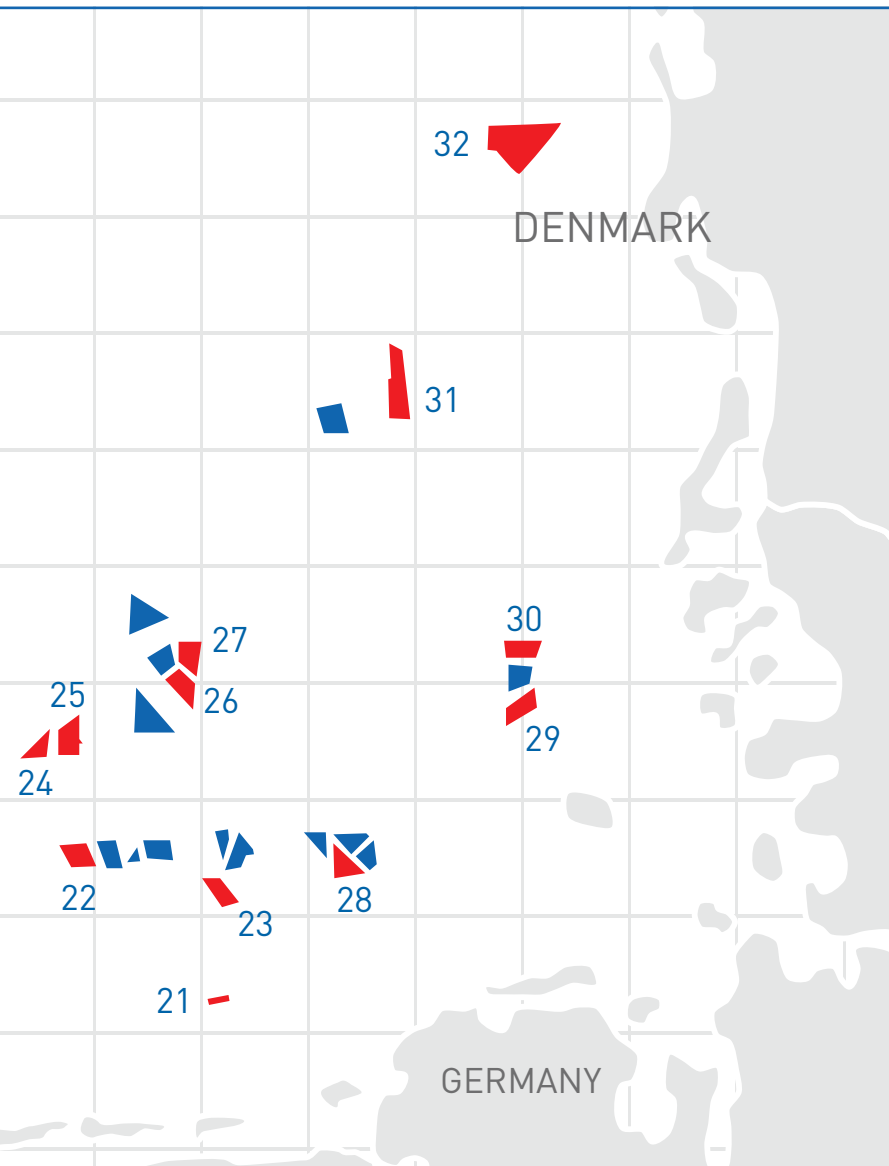
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North Sea Port track record in offshore



Source: 4coffshore.com



Offshore windfarms

North Sea Port has so far served more than 40 European windfarms.

- 01 Teesside
- 02 Hornsea One
- 03 Humber Gateway
- 04 LINCS
- 05 Dudgeon
- 06 Sheringham Shoal
- 07 East Anglia I
- 08 Galloper
- 09 Greater Gabbard
- 10 Gunfleet Sands
- 11 London Array
- 12 Thanet
- 13 Nobelwind
- 14 Alstom Halliade
- 15 Northwind
- 16 Rentel
- 17 Norther
- 18 Borssele I, II, III & IV
- 19 Luchterduinen
- 20 Westermeerwind
- 21 Riffgat
- 22 Gemini
- 23 Borkum Riffgrund
- 24 Deutsche Bucht

- 25 Veja Mate
- 26 Hohe See
- 27 Global Tech 1
- 28 Godewind
- 29 Meerwind
- 30 Amrumbank West
- 31 Dantysk
- 32 Horns Rev 3

Not visible on map

- Anholt
- Aberdeen Bay
- Beatrice
- Blyth
- Burbobank
- Moray Firth Offshore Metmast
- Rampion
- Tahkoluoto
- Walney Extension
- West of Duddon sands
- Wikinger

Offshore wind platforms

- Borwin
- Dolwin Alpha
- Sylwin

What makes an offshore champion?

No region is better equipped than North Sea Port for the offshore industry:

- Proven track record with abundant companies in and around the port area.
- Strategic port location, close to the North Sea.
- Excellent multimodal connections to the hinterland.
- Optimal port infrastructure.
- Multimodal, congestion-free hinterland connections.
- 55ha of (quayside) land available for offshore production, assembly and logistics.
- Lock-free port without tidal and air draught restrictions.
- Permanent 1,200t heavy crane capacity.
- Port seabed conditions are ideal for jack-up installation vessels.
- Board-to-board transshipment facilities.
- 24m-deep pocket for heavy lift operations with submersible vessels.
- Heliport.
- Flexible labour regulations.
- Transparent, reliable business authorities.
- Favourable cost structure.
- Excellent living and working environment.
- Friendly, dedicated and motivated workers ensuring quick turnaround times and safe and careful operations.

Offshore oil, gas and decommissioning projects

North Sea Port has also demonstrated its skills in other parts of the offshore arena. Below is a snapshot of several oil, gas and decommissioning projects.

- Brent
- Clair Ridge
- Edvard Grieg
- Ekofisk jacket
- Eldfisk
- Forties Alpha Satellite Platform
- Gina Krog
- Golden Eagle
- Ivar Aasse
- Mariner
- Martin Linge
- Montrose
- Solan
- South Arne
- Stinger Pioneering Spirit
- Thames Alpha
- Yme

Focussing on visibility



Daan Schalck, one of the two CEOs of the Port Authority of North Sea Port, has always preferred to work on the borderline of the public domain and the more commercial/private part of government.

Daan Schalck is one of the two CEO's of the Port Authority of North Sea Port. Together with Jan Lagasse, he was the face of the recent merger between the Port of Ghent and Zeeland Seaports.

Q: Mr Schalck, could you tell us something about yourself?

A: I am 55 years old, I have been married now for 30 years and I have two adult sons. I was born and raised in Ghent and I have a Master of Science in History from the University of Ghent. Besides my work at North Sea Port, I am a lecturer in International Port Management at the same university. I share my passion for culture with Jan Lagasse. I am chairman of the Collegium Vocale choir, I like to listen to music and I love to read.

Q: What brought you to work for the Port of Ghent?

A: I have always preferred to work on the borderline of the public domain and the more commercial/private part of government. I have been working on various corporatisation projects and before starting as CEO at the Port of Ghent in 2009, I had been working for three years at the Maatschappij Linkeroever as Managing Director for the development of the Left Bank of the port of Antwerp.

Q: In all the years you have been working in the Ghent port area, what is your most striking memory?

A: From a macro-economic perspective, I have noticed that in recent years the position of a port as logistics hub has changed rapidly. In the past, you always knew the way economic trends would influence a port's results. This is no longer a certainty nowadays. When looking from a narrower point of view, there are two current mega projects that are very appealing to me. One of these is the construction of the new lock at Terneuzen that will be highly important for the further development of our port area. The other project is of course the North Sea Port merger and more precisely, the relatively short period in which all parties concerned have been able to realise it.

Q: Now that the official necessary steps have been taken, how is the merger currently progressing?

A: I would say the best word to use is 'cheerful'. Most of the people at North Sea Port are very enthusiastic. Of course, the merger is still in full progress, and as long as the effect of the merger remains unclear for a department, there will be many questions. A merger between two organisations always has to deal with different cultures. In our case, there are certainly differences between the Dutch and Flemish way of thinking and working.

We are dealing with this by always mixing up teams for every project. This is the only thing that works, as it is the people at North Sea Port that will make the merger a success.

Q: In your opinion, when will the merger be a success?

A: People at North Sea Port should feel that we have grown into one organisation within three years. Within five years, we should be able to prove the added value of the merger with clear results to everyone outside of the organisation.

Q: Can you already reveal some positive effects from the merger?

A: One thing worth mentioning is the growing readiness within our region to collaborate. The rural Zeeland area, as well as the more urban area of Ghent, both have their challenges. The merger has a balancing effect, with both areas working as communicating vessels. Working together on a cross border scale already has positive effects on education, employment, environment, health, public transport, and culture. From a commercial point of view, everyone in the market is looking at us and taking us more seriously as we are now a top ten port in volume.

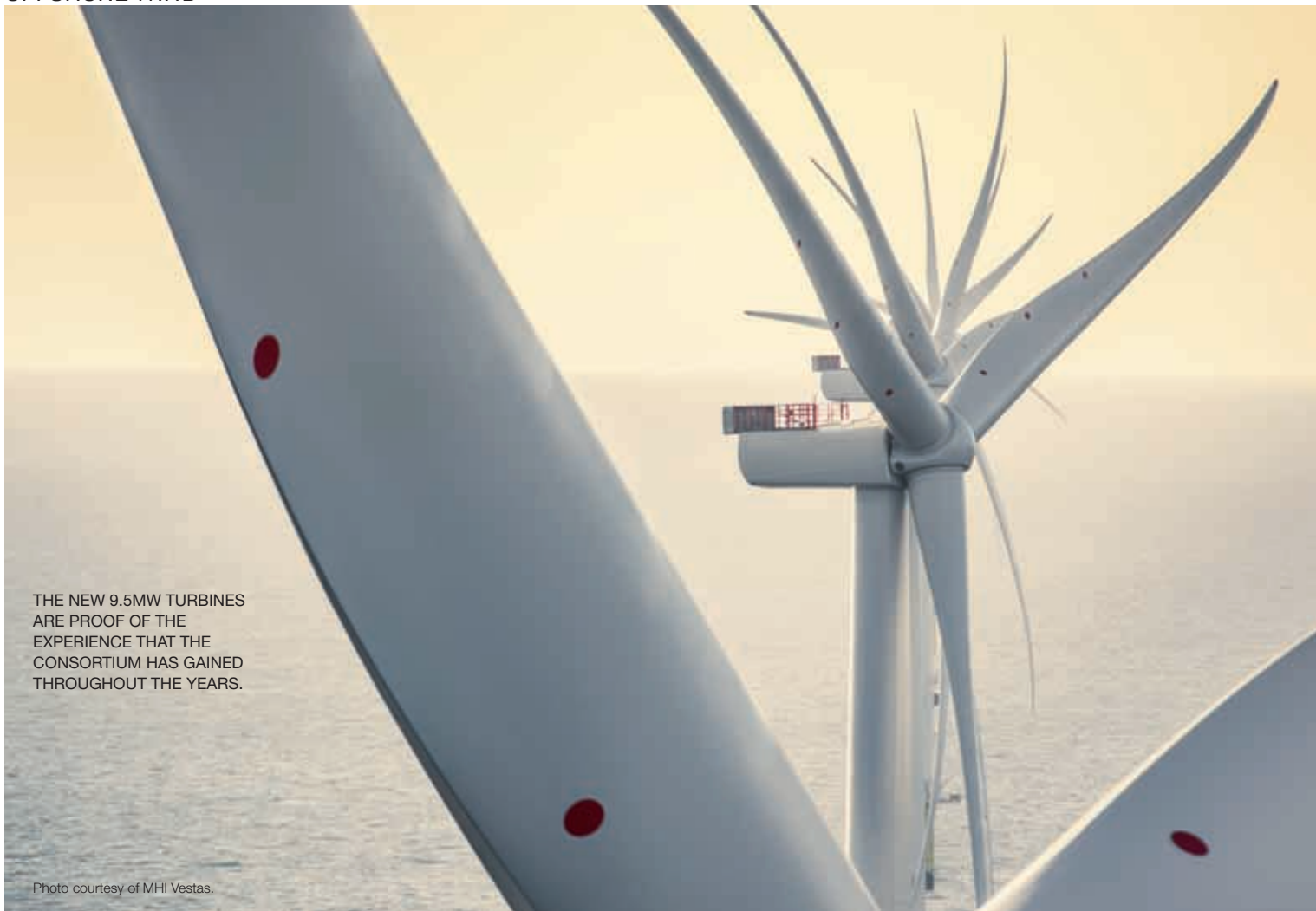
Q: What makes North Sea Port a strong combination?

A: We are convinced that the merger will result in further professionalisation. Do not forget, both port authorities were already doing very well, but united, things will go even better. We can learn from our best practices, we can learn from each other and the merger forces us to make choices. For every working method or tool, we are going to use the best one or we are going to combine the best of both into one.

Q: With the current world economy recovering, the results of the first half of 2018 are very positive for North Sea Port. How do you see the future?

A: In the past ten to fifteen years, it was a matter of supply following demand. Now, there are a lot of other uncertainties that are influencing world trade and our results such as Brexit, the US versus Europe, Iran, China, and so on. We have to find answers to this in diversification, in looking for new segments and markets, such as the offshore wind, food, and recycling of goods, and by keeping an eye on new trends such as the growing interest in meat alternatives and in cradle to cradle products. With our merger, one of the first important steps in fighting the threats has already been taken. One of the first things we are focussing on now is even more visibility in Europe and worldwide of our new North Sea Port brand as one new port.

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THE NEW 9.5MW TURBINES ARE PROOF OF THE EXPERIENCE THAT THE CONSORTIUM HAS GAINED THROUGHOUT THE YEARS.

Photo courtesy of MHI Vestas.

Built on experience

Borssele III/IV Offshore Windfarm

End of June, the Blauwwind Consortium announced Financial Close on the Borssele III/IV windfarm project in the Dutch North Sea. This formally set in motion the construction and subsequent operation of the 731.5MW windfarm.

The Blauwwind Consortium is formed by Partners Group (45%), Shell (20%), DGE (15%), Eneco Group (10%), and Van Oord (10%). Shell and Eneco Group have also secured fifteen-year Power Purchase Agreements (PPAs) from the Consortium, under which each will buy 50% of the power generated by the windfarm. Van Oord will execute the Balance of Plant for the project, consisting of the engineering, procurement and construction of the foundations and inter array cables, and the installation of the turbines, using the Aeolus installation vessel. The offshore substation Borssele Beta will be designed and constructed by TenneT.

Borssele I/II

The Consortium was originally founded for the Borssele I/II tender. When this tender was awarded to Ørsted, the partners decided to bid on the next Borssele offshore wind tender. Project Director of Blauwwind Roeland Borsboom explains, “The initial partners of Blauwwind, DGE, Eneco, MHI Vestas, Van Oord, and Shell already knew each other from working together in various arrangements and they decided to join forces for the Borssele I/II tender. Having missed out on Borssele I/II, we doubled our efforts to produce a winning bid for Borssele III/IV.” Part of the bid strategy was to have an investor join the team. This investor was found in Partners Group and half of the shares of DGE, Eneco, and Shell were sold to this Swiss investment management company, which has a long track record in, among others, infrastructural projects.

“For us the role of Partners Group is of great value as they are really active investors who think with us to reach the best results,” Mr Borsboom continues. “Until today the project is running as planned and from an organisational point of view things are going very well, as each partner has its focus in this project on Blauwwind’s interests.”

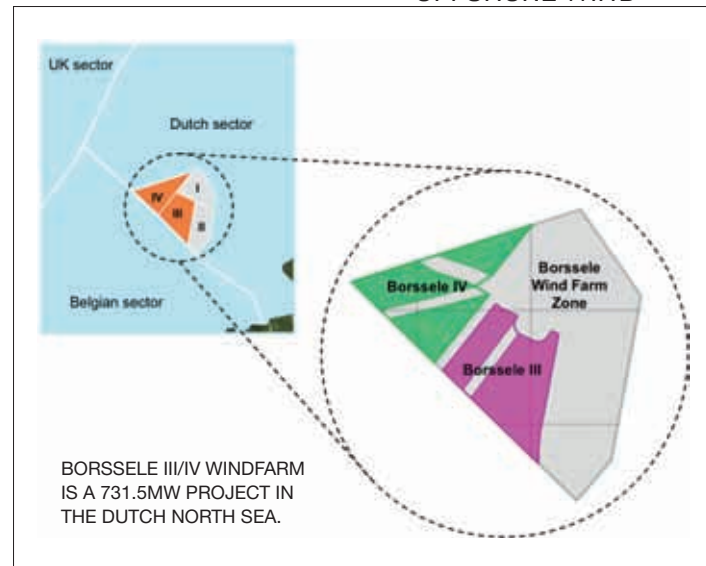
Several steps taken

“One of the largest advantages of this project is the fact that Blauwwind can make use of the expertise and knowledge of the participating companies,” says Michiel Spoor, Operations Manager at Blauwwind. “The challenge lies in how to make use of this in an efficient manner, but so far we are doing fine.” Although not visible, several steps have already been taken since the Financial Close was announced. “We are currently prefabricating components such as monopiles and inter array cables. The turbines are also prepared for the specific location.”

Mr Borsboom adds, “The UXO survey will be finished in October. After that, more detailed approaches of suspected locations will be conducted in the first half of 2019. The certification process has already been started and if everything goes according to plan, the first rocks for the foundations will be placed in Q3 2019. The first monopiles will be put in place in Q4 of 2019 or Q1 of 2020.” “Meanwhile, TenneT will be installing the jacket of the Beta substation, on which the topside is planned to be placed in Q1 or Q2 of 2020 as well,” states Mr Spoor.

Robust, but with competitive ideas

Borssele III/IV will be built on experience. Mr Borsboom adds: “For financing the project, we chose for reliable and trusted options, but in order to be able to set a low tender price, we also had to look for competitive ideas. Altogether, the project will be a mix of conservative and innovative solutions.” The new 9.5MW turbines are proof of the experience that the consortium has gained throughout the years. Mr Spoor continues, “These large turbines are an evolution of smaller turbines. Larger turbines mean we can build a smaller number of them, with higher power production. We have chosen to construct the turbines without transition pieces. This method



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BLAUWWIND HAS CHOSEN TO CONSTRUCT THE TURBINES WITHOUT TRANSITION PIECES. THIS METHOD WAS SUCCESSFULLY IMPLEMENTED IN OFFSHORE WINDFARM LUCHTERDUINEN.



Photo courtesy of Van Oord.

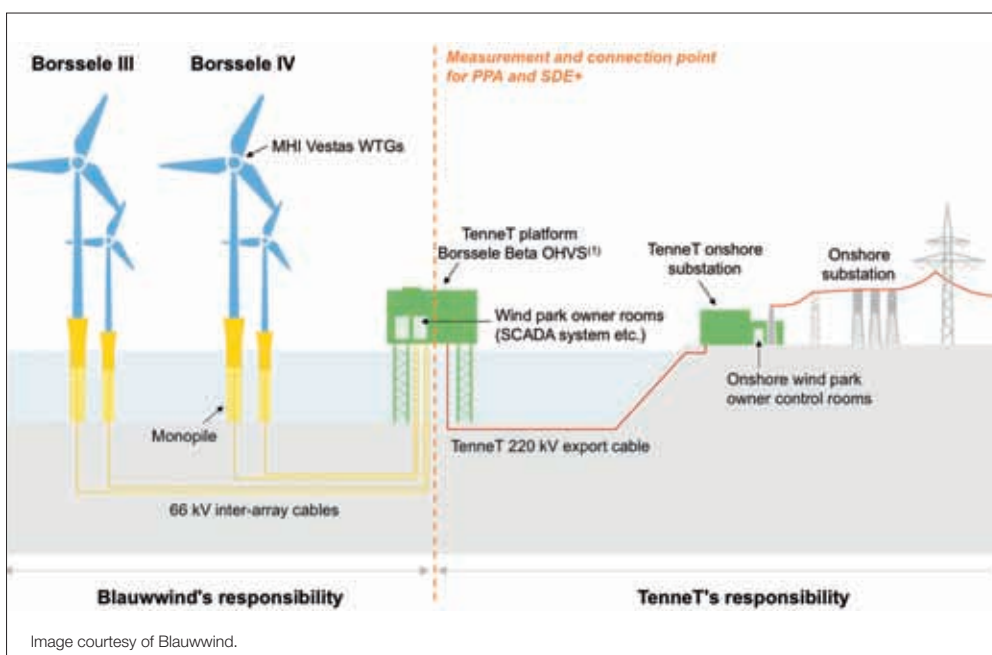


Image courtesy of Blauwwind.

THE OFFSHORE SUBSTATION BORSSELE BETA WILL BE DESIGNED AND CONSTRUCTED BY TENNET.

Joining forces

Mr Borsboom continues, “What would be truly interesting is to see what will happen when the operators of the various windfarms join forces in certain parts of their projects. As an example, for each offshore wind project, two guard vessels must be on standby at sea around the offshore construction area. For Borssele I/II and III/IV and their Belgian mirroring windfarms, this would mean around ten vessels stationed in Vlissingen and/or Oostende. Having this many guard vessels does not really make sense, and operators should join forces to discuss this matter with governments and get permission

has been around for a few years now, and was successfully implemented in offshore windfarm Luchterduinen by one of our consortium partners. In our case, it is also a fine solution to save time and money, without any loss of quality.”

Top-notch facilities

The Vlissingen port area has throughout the years gained an excellent reputation as an offshore wind hub, and Vlissingen will also play a role in the construction of Borssele III/IV. Mr Borsboom explains, “Vlissingen has an excellent location and top-notch facilities towards the Dutch, Belgian, and even UK offshore windfarms. It is expected that BOW Terminal will act as marshalling yard for the turbines. Vlissingen’s role in other parts of the project is not yet clear. Fact is that today and in the near future, various offshore wind projects will be realised offshore the Dutch and Belgian coast, more or less in the backyard of a small number of ports with the right facilities.”

to use each other’s guard vessels. The same counts for marine coordination, as many of these projects plan their offshore activities within the same timeframe. The approach to project certification is also an aspect that projects can align with one other. Acting as good neighbours will lead to more efficiency, cost savings, and improved safety at sea. With the proper proposition, the Vlissingen port could surely play a role in this.”

I. [HTTPS://NL.LINKEDIN.COM/COMPANY/BLAUWWIND](https://nl.linkedin.com/company/blauwwind)

A matter of fine planning and communication

THE NEW-TO-BUILD O&M SERVICE CENTRE WILL BE LOCATED IN THE BUITENHAVEN IN VLISSINGEN.



In July 2016, Ørsted won the tender for the construction and operation of the Borssele 1 & 2 offshore windfarm. Many steps have since been taken to enable the construction of this first large-scale Dutch windfarm.

Klaasjaap Buijs is involved in the project as Senior Construction Project Manager. "Soon after we were granted the project, individuals and companies contacted us looking for information, work or business. It was good to see that so many people and companies, both regional and national, wanted to get involved in the project.

Ample requests came from Zeeland, as the windfarm will be constructed offshore of this Dutch province. "This was logical for Ørsted, as we are aware of the role of people and companies from Zeeland in our project in the near future. The first event that we organised to inform stakeholders was in Zeeland, and we work closely together with Energy Platform Zeeland to stay tuned with the region."

Overseeing many tasks

Mr Buijs oversees the offshore construction project's overall coordination. The daily construction activities at the windfarm are organised and managed from a new temporary office in



Image courtesy of Ørsted.

A JETTY WILL PROVIDE SPACE FOR FOUR VESSELS DURING THE CONSTRUCTION OF THE WINDFARM.

KLAASJAAP BUIJS, SENIOR CONSTRUCTION PROJECT MANAGER AT ØRSTED: "EVERY STEP TAKEN, EVEN THE SMALLEST ONE, BRINGS YOU CLOSER TO FINALISATION."



Photo courtesy of Scherp! Fotografie.

Vlissingen. Mr Buijs is in Vlissingen about once a week, but when the actual construction starts, he will be here more often. Managing the offshore construction is a complicated task that requires effective coordination of offshore construction activities. "The EPC project consists of three elements: the construction of the foundation, the construction of the turbine components, and the windfarm's electrical system. In order to work efficiently and safely, it is important to keep control on the simultaneous operations. For safety reasons, for example, it is essential to know when someone is working on an electricity job. Meanwhile, it might be necessary to stop working on another part of the project. Another example is avoiding divers working on the subsea whilst piledriving is ongoing, even when it concerns work at a neighbouring farm, as the effect of piledriving can be noticed kilometres away."

Bird droppings

Another challenge for the offshore project is efficient preparation. Mr Buijs explains why, "Constructing a windfarm at sea really is a matter of good planning. Because of the distance and the limited space on both the construction vessels and the turbines itself, preparation is crucial. To give just a simple example, you cannot afford to forget a piece of equipment, as it will take too much time and money to return to shore to pick up forgotten items. This of course also counts for the construction phase, as well as for the O&M phase. To enable technicians to safely enter a turbine for maintenance or inspection, it is necessary to remove any bird droppings from ladders and gangways. Because of these details and the distance, it is obvious that a good communication between everyone involved

“ It is good to see that so many people and organisations in Zeeland, including the Port Authority, are very enthusiastic in their efforts to help us get the job done!

ØRSTED EXPECTS TO BE ABLE TO START ACTUAL CONSTRUCTION WORK ON THE O&M CENTRE BY THE END OF THIS YEAR.



Image courtesy of Ørsted.

is essential, even more than in other onshore projects. This is one of the reasons why constructing an offshore windfarm requires a relatively long period of preparation before the offshore construction can actually begin.”

Self-reliant

In his role Mr Buijs is furthermore responsible for the construction of the new-to-build O&M service centre, which will be located in the Buitenhaven in Vlissingen. “We expect to be able to start actual construction work on the O&M centre by the end of this year. Cordeel, a company based in Vlissingen, has been contracted for the construction of the O&M base. We will plan on one year for the construction of the onshore facilities. The preparatory work recently began with removing the existing road and the modification of the current sewers and utility lines.” The centre will include a total floor area of 2,100m². Part of this will be used for offices, another section will be used as a workshop and warehouse. A jetty will provide space for four vessels during the construction of the windfarm. The O&M organisation of Ørsted plans to standardly have two vessels ready. As a provider of renewable energy, Ørsted puts ample effort into making the centre as sustainable as possible. “We have managed to design a complex that will be energy-neutral. The building will have solar panels, the residual heat from the servers will be used for heating the warehouse, we will not be using natural gas for heating, high-rate isolation material will be used, and the shore power for the vessels will also be provided

from solar panels. So we will be completely self-reliant for power,” Mr Buijs comments.

Getting the job done

Recruiting for the O&M centre will start later this year. This is going to be an important issue for the company, as a staff of 50 should be ready before the windfarm becomes operational. “After recruitment, the people, especially the technicians, will likely be trained at one of our service centres abroad and on existing offshore windfarms.” For logistical reasons, we are aiming at people living in Zeeland. Working at sea and at a great height requires a certain attitude and of course technical skills. This is asking a lot from our recruiters. In order to get the right people, we closely collaborate with educational organisations and recruiting companies located in Zeeland.”

Mr Buijs has worked on various offshore wind projects abroad, and this will be his second Dutch project. “The first project that I completely coordinated was Gode Wind. Working on complex construction projects yields a certain vibe. Every step taken, even the smallest one, brings you closer to finalisation. And now, after six years of working for Ørsted, it is truly a great opportunity to oversee a Dutch project. It is good to see that so many people and organisations in Zeeland, including the Port Authority, are very enthusiastic in their efforts to help us get the job done!

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CONSTRUCTION OF GODE WIND, THE FIRST PROJECT THAT MR BUIJS COMPLETELY COORDINATED. “BECAUSE OF THE DISTANCE AND THE LIMITED SPACE ON BOTH THE CONSTRUCTION VESSELS AND THE TURBINES ITSELF, PREPARATION IS CRUCIAL.”

Photo courtesy of Ørsted.

Offshore Energy 2018

Offshore Energy Exhibition & Conference (OEEC) is the Dutch offshore energy event focussing on the entire offshore energy industry, from oil & gas to wind and marine energy. Founded in 2008, OEEC has been breaking records year after year. This annual event will be held on (22,) 23 and 24 October 2018 in Hall 1, 2, and 3 of RAI Amsterdam. Based on its track record, OEEC expects to attract over 12,000 offshore professionals representing around 90 nationalities, with over 600 key players from the offshore industry exhibiting. In three large halls at the Amsterdam RAI, covering an area of over 22,500m², leading companies will highlight their products, services, and innovations. The exhibition floor provides an effective platform for networking and creating new business opportunities.

I. WWW.OFFSHORE-ENERGY.BIZ

Offshore Energy 2018 expectations:

- Number of exhibitors > 600+
- Number of visitors > 12,000+
- Number of delegates > 1,500+
- Exhibition space > 22,500 m²
- Exhibitors, visitors and conference delegates representing over 90 nationalities

ON AN AREA OF AROUND 22,500 M², YOU WILL FIND LEADING COMPANIES HIGHLIGHTING THEIR PRODUCTS, SERVICES AND INNOVATIONS.



Photo courtesy of Navigo.

Visit us

1.800 North Sea Port pavilion:

De Ruyter Training & Consultancy
Draftec
Energy Port Zeeland
Hillebrand ASK Romein
Mammoet
Multiraship Towage & Salvage
North Sea Port
Overlasko Constructie
Prior Group
Sagro
Shipyards Reimerswaal
Supermaritime Nederland
Verbrugge International
VDS
Zeeland Airport
Zeeland Bunkering
Zeeland Port Promotion Council

1.203 BOW Terminal
1.300 Damen Shipyards
1.634 Delta Marine Crewing
1.610 Hoondert Services & Decommissioning
1.313 Hydrauision
1.810 Liftal
1.905 Multiraship Towage & Salvage
2.208 N-sea
1.908 Offshore Industry magazine
1.112 OOS International
1.510 Schelde Exotech
1.202 Seacontractors

BOW Terminal

Booth: **1.203**



Bow Terminal is located in the Port of Vlissingen and is excellently situated on the North Sea. The Terminal has a surface of 25ha and a heavy-load quay length of 525m. An extra 1,400m is available for layby and mobilisation activities. Currently Bow Terminal is the marshalling hub for the East Anglia One foundations. As from September 2018, Bow Terminal will accommodate MHI Vestas for several years, which includes the storage of WTG components.

Damen Shipyards

Booth: **1.300**

Damen Shiprepair Vlissingen, part of the Damen Shiprepair & Conversion group, is a yard that is fully equipped for repairing, servicing and converting all types of seagoing vessels and offshore installations. The company can accommodate vessels of up to 215m in length and with a 30m beam in its docks. Steady and stable soil conditions allow rigs in jacked up position alongside the quays.

Facilities include two graven docks (of which one is covered), three quays with a total of 925m, and six cranes. Furthermore, the enterprise has a high-quality in-house paint subcontractor, a panelling street for the construction of large block sections, and all the equipment required to execute the most challenging repairs. The company has permission to accommodate and work on tankers in a nongas-free or inerted condition.



Delta Marine Crewing

Booth: **1.634**

Delta Marine Crewing is an intermediary agency based in Vlissingen. The crewing managers at the intermediary bring employers and employees together every day, so that projects worldwide are ensured of continuity and the right men for the job. To achieve a quick match, Delta Marine Crewing has a global network at their disposal. With its knowledge about the business and projects of its clientele, the company helps to find the right people for the job.

All crewing managers at Delta Marine Crewing share a maritime background and experience in this field. At the intermediary, seven people work closely together and everyone knows what's what. So whoever you get on the phone will know about your business.

Draftec

Booth: **1.800**

Since its establishment in 2009, Draftec has offered its clients integrated solutions using combined know-how in the areas of hydraulics, electronics, automation and mechanics. In the early days, the focus of the company was on engineering, but throughout the years, Draftec has extended its activities into production and installation as well. With their solutions, Draftec aims at heavy industry sectors, onshore as well as offshore. They supply not only components and systems but also complete installations.



Platform Energy Port Zeeland is the place where professionals from education, government, and business meet one another both offline and online. Ideas are exchanged and joint initiatives are developed on the growing offshore and wind industry. Ever since the start in 2017, the platform facilitates, stimulates, and promotes connectivity within the offshore wind industry. 250 companies currently participate in Energy Port Zeeland, forming a dynamic network. Joining forces results in the realisation of more corporations in the offshore wind industry in Zeeland. The participating companies demonstrate to the world that Zeeland is the area to be when it comes to offshore wind energy. Participation is free.



Hoondert Services & Decommissioning

Booth: 1.610



Hoondert Services & Decommissioning BV is focusing on the following North Sea related activities:

- Dismantling and recycling of ships, shipwrecks and offshore installations
- Refurbishment of offshore installations
- Transportation, loading, assembly and storage of maritime structures
- Support of maritime, offshore and wind energy projects
- Support and storage for maritime emergencies
- Ship cleaning & maritime waste

They operate a yard in Vlissingen with direct and unrestricted access to the North Sea. The yard is well equipped with heavy-lift capacity and optimised to be a multipurpose land / sea interface. Keywords: dismantling, recycling, reuse, refurbishment, hazardous waste, NORM, assembly of large structures, special projects, mobilisation.

Liftal

Booth: 1.810

Liftal is a full-service company in the field of hoisting systems and applications. They are specialised in the sales, service, maintenance and rental of hoisting equipment, in advising customers about hoisting and lifting equipment, as well as in administration, development and certification. From zero up to 1,000t.

ATEX-Certified Service Facility, unique in its branch, test barge, water bags, load cells, certified inspectors and a warehouse to complete customers' demands in time and according to internationally required standards.

Quality systems

- ISO 9001-2000 (BVQI)
- SCC Safety Certificate for Contractors (Petrochemical Industry) / VCA*
- EKH (DNV-certified association of approved verification companies for hoisting and lifting means)
- LEEA Member – Lifting Equipment Engineers Association
- ATEX/ IECeX Certified Service Facility, Dekra approved



Mammoet's terminal take chain optimisation one step further. Factory-to-foundation projects require accessible ports with connections to all other modes of transport, sufficient ground bearing capacity, and heavy lift facilities. The Mammoet Terminals in Westdorpe are ideally located in the international ports of Terneuzen, Ghent and Antwerp. The terminals offer unique, 24/7, tailor-made solutions for your supply chain management, varying from small one-off services to fully completed services. The Multipurpose Terminal Westdorpe provides:

- Moving Loads (sledding, jacking, SPMTs) and also via RoRo quay;
- Lifting work (loading, unloading and transshipment);
- Transport by rail, road, and water;
- Storage facilities (8,000m² covered storage, 10,000m² outside storage);
- Assembly / disassembly (modules, bridges, cranes, windmills);
- Just-in-time delivery;
- Feeder services;
- Container and bulk handling.



Multraship Towage & Salvage

Booth: 1.905



Terneuzen-based towage and salvage provider Multraship is continuing to expand its involvement and expertise in the renewable offshore energy sector, in addition to its salvage, harbour and sea towage services.

Multraship holds exclusive call-off agreements with several oil majors for rig moves/anchor-handling operations and with a major marine contractor for anchor-handling assistance during windfarm installation work, all in the North Sea area.

Multraship's large fleet of modern anchor-handling tugs and support vessels means it is ideally equipped to perform in a variety of harbour, at-sea and offshore roles.

North Sea Port

Booth: 1.800

North Sea Port is the merger of the Dutch Zeeland Seaports (ports of Vlissingen and Terneuzen) and the Flemish Port of Ghent. This cross-border port makes up a port area with a strategic location in North-West Europe. This port area has excellent access to the Western Scheldt estuary which, in turn, offers open access to the North Sea and is extremely close to international navigational routes. The maximum draught of 17m means that even the largest vessels can access the port.

The port area is home to approximately 525 companies which are active in dry and liquid bulk, break bulk, ro/ro, industry, logistics and warehousing. Together, they are responsible for more than 98,000 employment jobs.



Offshore Industry is a leading publication for the international offshore industry. The magazine has built up a strong reputation for providing the latest news, informative editorials, rich photography and high-quality production and has a broad readership including operators, contractors, engineers and managers. For anyone active in the offshore industry worldwide, Offshore Industry is a must-read! In addition to the magazine, a digital edition, which can be accessed through its dedicated website offshore-industry.eu, as well as a digital Newsletter, create even wider coverage.



OOS is an international company providing highly qualified construction services within the offshore industry. The company has a unique position offering turnkey accommodation, heavy lift solutions and P&A capability. OOS owns a modern and advanced fleet, existing of state-of-the-art semi-submersible crane vessels (SSCV) with a crane capacity up to 4,400t in tandem lift, a sizeable hotel capacity of 500 to 750 persons on board and a specially reinforced large open deck space. This deck space is suitable to lift heavy modules on board during the execution of installation and decommissioning campaigns. The Multi Activity Units of OOS are suitable for various markets, from the offshore wind industry to plugging & abandonment and decommissioning. Through innovation and the team of professionals, passionate about their work and the industry, OOS is able to deliver excellence in order to lift your projects to a higher level.

Sagro is located in the Port of Vlissingen. The terminal is suitable for the transfer and handling of piece and bulk goods such as sand, salt, wood chips, and GMP goods. This company can process your goods before they are stored or transferred. It can for example crush, sieve, sort or weigh the goods. The enterprise offers temporary and long-term storage in its warehouses and stockyard. In addition to these services, Sagro can also be commissioned for the decommissioning of ships, offshore constructions, and similar objects. Besides offshore decommissioning, transshipment, storage, and business solutions, Sagro is active in the fields of infrastructure, demolition, space and the environment, logistics, and recycling.



Schelde Exotech

Booth: **1.510**

For many years, Schelde Exotech have been specialists in welding exotic materials like titanium, aluminum, stainless steels and high-alloys. Working for several industries such as oil & gas, nuclear and chemical & petro chemical, the Ministry of Defence and scientific institutes, they have gained broad experience in fabricating pressure vessels and equipment with these materials. Overlay welding of specialty forgings has been one of the special welding processes executed by Schelde Exotech since 2012. In early 2017, Schelde Exotech extended their portfolio with ID-cladding of forgings of 18m in length. Well known clients are; FMC, Technip, Cameron, Total, Shell, etc.



Seacontractors

Booth: **1.202**

As a well-respected and reliable maritime service provider, Seacontractors operates a fleet of modern vessels, well-equipped for worldwide operations. The company now operates a fleet of twenty Anchor Handling Tug (AHT) vessels and Multi-Purpose Vessels (MPV) in the range of 20-85 tons bollard pull, with a focus on shallow draft operations. The company focuses on quality, a solid client base, people, and the environment. With its current positions in North-western Europe, the Middle East, Australia, and West Africa, Seacontractors is active in the following market segments:

- Offshore oil & gas
- Offshore wind support / renewables
- Maritime infrastructure
- Emergency response, salvage, and wreck removal
- Towing and ship/terminal handling

Whether acting independently or through strategic partners, Seacontractors prides itself on working at international standards at any location worldwide.

Shipyard Reimerswaal

Booth: **1.800**

Founded in 1985, Shipyard Reimerswaal is specialised in repairs and refits of seagoing vessels of all types. Dredgers, tankers and general cargo ships as well as tugs, offshore vessels and large fishing vessels found their way to Hansweert, close to the north banks of the Western Scheldt river, between Vlissingen and Antwerp. In spring 2017, they opened their new facilities in the port of Vlissingen (Sloehaven) where they are able to handle larger ships due to a water depth of at least 9.5m at low tide. A 350m-long repair berth and two floating docks, one of 110m x 18m and one of 120m x 22m, as well as a modern workshop, are at the client's disposal. At this new location, there is a significant increase in mobilisations and demobilisations of ships operating in the offshore-wind industry.



WHATEVER YOUR TECHNICAL CHALLENGE...

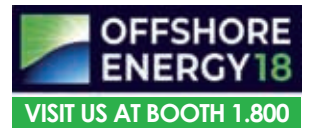
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system integrating solutions for the offshore energy & renewables sector

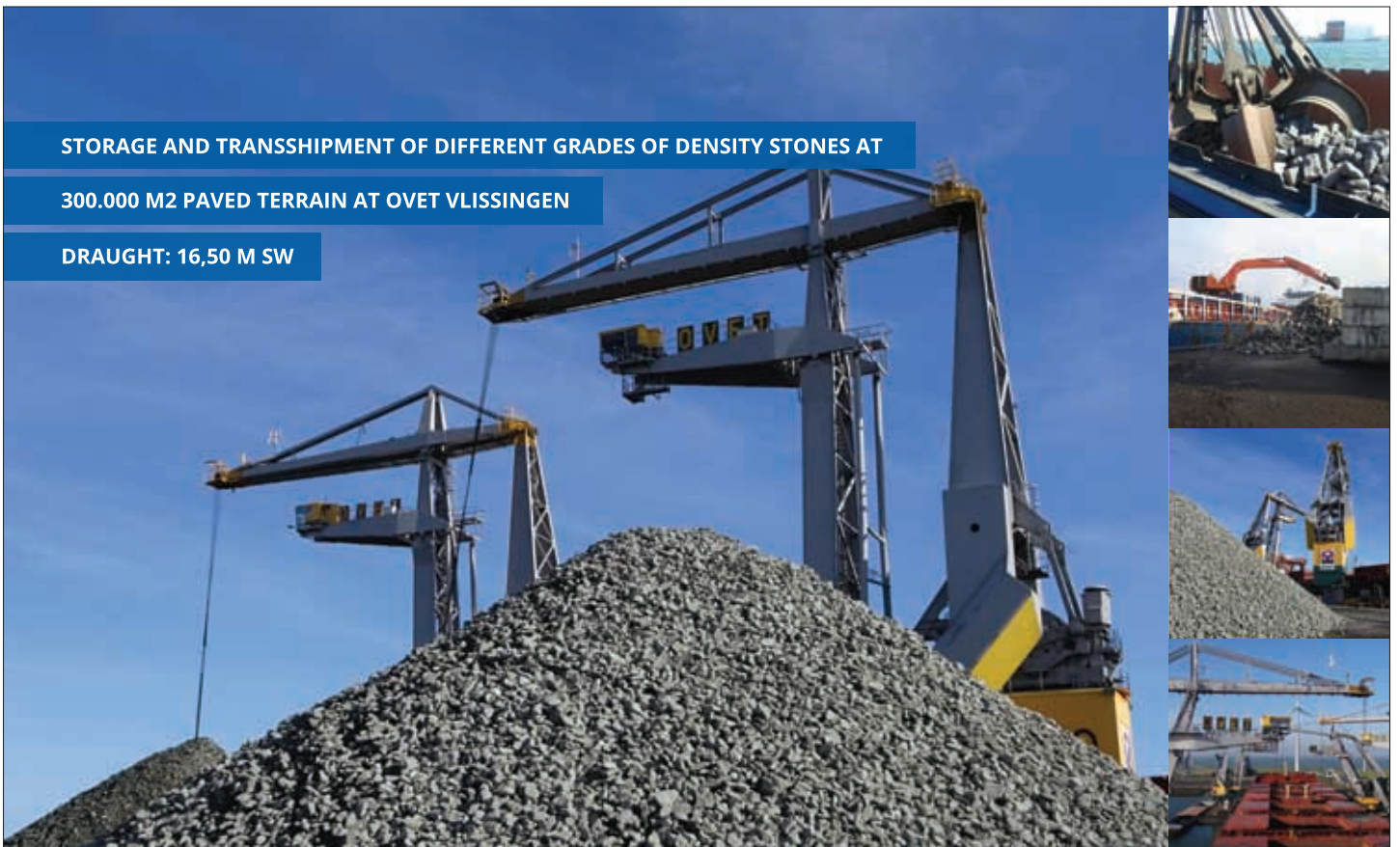
- extensive hydraulic, electrical and mechanical expertise
- from engineering and logistics support to complete turnkey projects
- young, dynamic team of pro-active project managers



STORAGE AND TRANSSHIPMENT OF DIFFERENT GRADES OF DENSITY STONES AT

300.000 M2 PAVED TERRAIN AT OVET VLISSINGEN

DRAUGHT: 16,50 M SW



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E-mail: info@ovet.nl

Contact: Mr. Bram Peters
Mr. Peter Van Dael
Mrs. Ilona van Drongelen



Supermaritime

Booth: **1.800**

With a great focus on Sub Saharan Africa, the Supermaritime Group offers vessel agency and logistics services. Customer dedication, extensive local and global experience, and tailor-made solutions are the company's key differentiators. Operating from 36 offices in 16 countries (10 in Africa), the group is managed by a team of dedicated and experienced shipping and logistics professionals. Their teams in Rotterdam and at other global locations manage complex and challenging projects on a daily basis. The Project Logistics Specialists team is renowned for its proactive and dependable approach. Supermaritime Nederland, with its deep-sea terminal located in Vlissingen, can efficiently handle all types of cargo, but specialises in project cargoes such as oil & gas, offshore wind, dredging, and energy equipment.



Verbrugge International

Booth: **1.800**

Verbrugge International is a leading logistics service provider, offering three large deepsea project cargo terminals in the ports of Vlissingen and Zeebrugge. Verbrugge has gained extensive experience in handling large-scale offshore projects, employing highly motivated and qualified operators. The two Vlissingen terminals, as well as the Zeebrugge terminal, are located in the economic centre of Northwest Europe, right on the North Sea. They offer a heavy-duty quay length of more than 4km, 231ha of terminal area and 78ha of warehousing space. All the above, in combination with large expansion potential and a full range of services, makes Verbrugge International an ideal partner for logistics solutions to offshore projects.

Zeeland Port Promotion Council

Booth: **1.800**

Zeeland Port Promotion Council (ZPPC) is a non-profit organisation, whose main objective is to promote the port of Zeeland and ZPPC participants. ZPPC currently has over 130 participants, which are companies that mainly originate from the port sector in Zeeland and are active in maritime services, transport and logistics, or industry.

The foundation strives to enhance the position of the port of Zeeland. Companies and institutions with a direct or indirect interest in this objective can become a participant. ZPPC offers a platform for all parties concerned with the port of Zeeland for connecting, networking, exchanging information, and for engaging in business. ZPPC acts as a port ambassador on behalf of its participants. The foundation's activities consist of organising the port network, promoting the port both nationally and internationally, as well as creating, enhancing, and maintaining public support for the port within the region.



The green future of ‘urban mining’

Heros Sluiskil strives to meet its Green Deal deadline



All photos courtesy of Heros Sluiskil



HEROS SLUISKIL PROCESSES 650,000T OF WASTE-TO-ENERGY (WtE) BOTTOM ASH ANNUALLY.

Heros Sluiskil is on a mission. The recycling company, which processes 650,000t of waste-to-energy (WtE) bottom ash annually, is working hard to meet their Green Deal deadline of early 2020.

Back in 2012, WtE plants (Afval Energy Centrales, or AEC, in Dutch) in the Netherlands entered into a Green Deal with the Dutch government to improve the cleanliness of bottom ash. The companies agreed to invest in finding sustainable, useful applications of WtE bottom ash (referred to at Heros as AEC bottom ash), and to help develop and communicate initiatives to that end.

From ash to roads

The bottom ash that Heros processes is what remains when household waste is incinerated. Heros Sluiskil extracts raw materials from the coarse incinerator (WtE) bottom ash, a process they refer to as urban mining. 90% of the bottom ash remains. This is referred to as Isolated, Controlled and Monitored (ICM) quality ash. ICM-quality ash is subject to environmental requirements, as it can still be mildly polluting due

to the presence of small plastic particles and other residues. It is a certified material for road construction, as long as the bottom ash is isolated (by packing it in a foil, for example), and therefore controllable.

This type of bottom ash is used on a large scale for road construction projects, currently including the Sloeweg. According to Arie de Bode, Managing Director at Heros, the use of the granulate as embankment material, such as in the case of the Sloeweg, is not its ideal application. He prefers it to have a superior function, such as its use at the Maintenance Value Park in Terneuzen, for example, where it forms a foundation layer underneath the building's brickwork.

One deadline down, one to go

For Heros, the first deadline for the Green Deal's ambitious goals was in 2017. As of 1 January 2017, the company has been able to use half of its total amount of bottom ash as ICM building material. The other half since then needs to be washed and strained, filtering out plastic particles and small threads and thus making the ash more environmentally friendly. Heros invested in a treatment facility, which thoroughly flushes, strains and filters the bottom ash, and thereby managed to meet the first part of their deadline.

CURRENT ROADWORKS AT THE SLOEWEG, WHERE ICM QUALITY ASH GRANULATE IS BEING USED AS EMBANKMENT MATERIAL.



ONE OF THE METALS THAT HEROS EXTRACTS FROM THE WTE BOTTOM ASH IS ALUMINIUM.



ONE OF THE APPLICATIONS FOR GRANOVA GRANULATE.

The second part of their Green Deal deadline follows in early 2020. After 2020, ICM-quality products will cease to exist, and Heros' building materials for road construction need to meet the requirements of the 'Decree on Soil Quality'. It is possible that a transitional period of a year will be allowed for ICM-quality products, but after that, it is over. Finding a market for the remaining stock of ICM material is not a problem, says Mr de Bode. This year, Heros is delivering another 200,000t of ICM-quality bottom ash to the Sloeweg construction site. Another 50,000t (or maybe even 100,000t) will be taken to the Midden-Zeeland landfill. Next year, 300,000t are destined for Dordrecht, and the province of Drenthe has also expressed interest.

Granova combimix

After washing the ash, different sub-fractions are formed. One of these is a coarse granulate, which Heros calls granova combimix. This environmentally friendly building material is suitable for the construction of embankments or slopes, just like its ICM-quality predecessor. Granova combimix is more attractive visually and of a superior quality, making it very suitable for foundations or cement applications. The treatment facility for this product is already operational, running on limited capacity this year. If Heros succeeds in meeting its Green Deal goals, the granulate will be of such high environmental quality that it can be used in embankments without needing to be covered. The plan is to make

that a reality in about a year's time. A certificate has been issued to Heros by the Dutch Department of Waterways and Public Works for its granova combimix, which is a great milestone for Heros. When a product gets certified by the Department of Waterways and Public Works, it is guaranteed to be safe to purchase and apply in the Department's (roadwork)

projects. At present, only Heros and Boskalis have received a certificate for their sustainable secondary building materials.

Brickworks

Another residual fraction that remains after cleaning the ash is a very fine material, from which Heros is currently creating bricks. After thorough testing at a traditional brickworks factory, Heros is now starting production of two sets of 5000 bricks. When asked what they plan to do with the bricks, Mr de Bode said with a grin: "We will use them to build a little house, of course! That way, everyone can see what their trash can be turned into."

Some residue is left after the flushing and straining process, which Heros will be allowed to dispose of at the landfill. This was not allowed under the previous regulations, because everything was designated as ICM quality and there was a landfill ban. From 2020 on, Heros will have an exemption, which allows them to dispose of a maximum of 15% at the landfill. As disposing at a landfill is expensive, they have plenty of reason to try and avoid this.

Complying with additional rules

The European Union might be a free-trading zone, but every country complies with its own rules and regulations. France also uses ICM-quality building material, but they use a different standard and still

“ Small things truly matter at Heros. Their second installation was built in order to recover 0.2% more metals from the ashes.



ARIE DE BODE, MANAGING DIRECTOR AT HEROS SLUISKIL.



AERIAL VIEW OF ECOPARK TERNEUZEN.

have a lot of landfill residue. Belgium has yet another standard to meet, as does Germany, or the UK. Heros is looking to open up export possibilities by complying with these additional rules. The UK, Belgium, and France all transport bottom ash to Heros for cleaning, so being able to send inland carriers back, filled with an end product, is a goal worth pursuing.

Extracting that extra 0.2%

Cleaning minerals is all well and good, but a company also needs to maintain a healthy revenue model. The more metals that Heros manages to extract from the WtE bottom ash, the better. A little over a year ago, Heros opened their new metal-recovery plant. Previously, they used to sell the metal fractions they collected as concentrate. With the new plant, Heros is

able to clean these themselves, and sell the metals – mainly aluminium, but copper too – directly to smelters.

Small things truly matter at Heros. Their second installation was built in order to recover 0.2% more metals from the ash – which is why the company refers to its processes as mining. Mr de Bode is already feeling the pressure to set up another plant like this one.

Records & Expansion Plans

Heros could be setting a new transshipment record this year, by reaching the milestone of transporting a million tonnes from the Heros quayside – which means the transshipment of two million tonnes in both import and export, mainly by inland shipping barge.

The biodiesel production at Heros' neighbour, Neste – also part of Ecopark Terneuzen – is also thriving. This Finnish company is keen to expand its factory and perhaps build an additional office building.

Heros also has expansion plans, apart from the upscaling that is required for the Green Deal. These concern their tank terminal, which is currently filled with water that needs to be purified. Heros' water purification plant currently has a 'two street' system and could use an additional third and, later on, fourth street. Heros hopes to realise the third street before 2020, to further process the dirty water that comes out of the treatment facility where the bottom ash is washed.

There is a possibility that Heros will be able to acquire an area to the north of their site, which is owned by a farmer who, perhaps, may be willing to part with it in the future.

At present, the company is preparing the required permit applications, which are scheduled to be filed in early 2019. The designs for the upscaled facilities are being drawn up, and final tests for the latest straining processes are being conducted. If the construction permit is granted, most probably after the summer of 2019, Heros Sluiskil can start construction. By the beginning of 2020, the upscaling process should be completed and the 650,000t of bottom ash at Heros can be cleaned according to the latest technologies and know-how.

Mr de Bode is eager to reach the Green Deal goals and then to continue innovating in other directions. For him, Heros' constant renewal, including applying new technologies and even discovering them, is what keeps it fascinating.

Heros collaborates with the Technical University of Eindhoven. They provide PhD positions for four students every year, and are now in their fourth consecutive year. The company is also talking to the The Hague University of Applied Science, who are eager to study the potential use of robot technologies to try and collect RVS from Heros' WtE bottom ash.

In the future, things will change regarding the markets Heros can cater to. The ICM-quality building material has, until now, been available free of charge, but the new products require so much energy in the filtering and cleaning process that Heros will need to charge for them. Logistics will become a more defining issue, as transporting their materials to all corners of the Netherlands will no longer be profitable. According to Mr de Bode, there will also be a shift from large road building projects to more general public outdoor space applications. The challenge is how to adapt to the new situation in time.

A circular role model

How Stora Enso made its paper mill in Ghent sustainable.

The Swedish-Finnish Stora Enso Group is a leading provider of renewable solutions and believes that everything that is made with fossil-based materials today, can be made from a tree tomorrow. One example of this is Stora Enso's paper mill in Langerbrugge. This sustainable paper mill is in fact a role model thanks to its closed ecological system.



THE WORLD'S MOST EFFICIENT
NEWSPRINT MACHINE.

All photos courtesy of Stora Enso Group

Stora Enso Langerbrugge was founded in 1932 and is located in the Ghent port area. The mill produces recycled newsprint and magazine paper and is the only one in Belgium with a de-inking installation. They also have the world's most efficient newsprint machine.

The location in Ghent was a matter of chance. In the late 1920's the Electrabel power plant in Langerbrugge was looking for a company that could use their steam and electricity, which created a perfect situation for starting a paper mill next door. When the Electrabel power plant was closed about ten years ago, Stora Enso Langerbrugge decided to go green and is today almost 100% sustainable.

Making paper sustainable

Stora Enso is one of the largest users of Paper for Recycling (PfR), old paper, in Europe. The mill in Langerbrugge produces 400,000t of recycled newsprint and 140,000t of uncoated recycled magazine paper each year. "Typically, paper can be recycled up to seven times. It is suitable for products with a short life cycle, such as newspaper and magazine paper," says Chris De Hollander, Managing Director at Stora Enso Langerbrugge. Reusing paper as a raw material improves material efficiency and supports sustainability targets.

The paper mill also invests in other sustainable processes and created a circular economy in more ways than one.

Circular economy

The paper cycle is a closed ecological system. In order to make paper, the mill needs paper. First, they collect old paper, sort it, de-ink it, and then make new recycled paper out of it. This paper will in turn be printed again, used by the consumer, and discarded, after which the cycle will start all over.

CHRIS DE HOLLANDER,
MANAGING DIRECTOR
AT STORA ENSO
LANGERBRUGGE.



ARIAL VIEW LANGERBRUGGE MILL



THE PAPER MILL ANNUALLY PRODUCES 400,000T OF RECYCLED NEWSPRINT AND 140,000T OF UNCOATED RECYCLED MAGAZINE PAPER.

Another circular system is Stora Enso's water treatment. To make paper the mill needs water, which they gather from the Caele, a stream nearby. The water from the stream is cleaned in a fresh water treatment and is then used during the paper production process. Once the water can no longer be used in production, it is filtered by a wastewater treatment system and streams back to the canal Ghent-Terneuzen. The water treatment system has a capacity of 23,000m³ a day, the equivalent of 150,000 households.

Sludge is formed during the de-inking and waste water treatment, which brings us to the third circular economy surrounding power. The mill has its own power plants that burn biomass: internal sludge and external waste wood and RDF, Refuse Derived Fuels or specific industrial waste. The left-over ashes of the power plants are useful in the cement industry and road construction. All the steam and electricity made by the mill is used onsite to make paper and to supply green heat in the Ghent port area.

Direct pipeline to Volvo Car Gent

Stora Enso and Volvo Cars opened up a 4km hot water pipeline between their manufacturing sites in Ghent in 2016. The pipeline unites the two sites into a long-term partnership to combat global warming.

Through the pipeline, 125°C water is carried from the mill to heat the buildings and paint booths at the Volvo Car plant, ensuring Volvo Cars uses less fossil fuels for heating. This project was made possible with financial assistance from the Flemish Government, which provided an ecology subsidy of



The mill is constantly seeking smart ways to increase the use of its assets and reduce fossil carbon dioxide emissions.

EUR 2 million. This long-term collaboration leads to annual CO₂ emission savings of around 15,000t and reduces the Volvo plant's total CO₂ emissions by more than 40%. The annual reductions correspond to the heating requirements of 5,000 households.

"The construction of a system of industrial district heating outside our premises and the delivery of external renewable energy to Volvo Car Gent leads to increased energy efficiency, which is beneficial to the environment and increases the use of our resources," explains Mr De Hollander.

Investing in the future

The mill is constantly seeking smart ways to increase the use of its assets and reduce fossil carbon dioxide emissions. That is also why the company strives to source PFR as close as possible to the mill. Closer means shorter transportation distances and lower related costs and environmental impacts. Earlier this year, the paper mill started the construction of three wind turbines on its site. These turbines have a capacity of 3.2MW each and will produce 21GWh per year, the equivalent of 6,000 households. As a result, the mill's annual CO₂ emissions will decrease by 9,600t.

All the renewable electricity produced by the wind turbines will



THE WASTEWATER TREATMENT SYSTEM HAS A CAPACITY OF 23,000M³ A DAY.

be used for the paper production on site, resulting in an even more sustainable production process. Wind4Flanders, a public-private partnership between ENGIE and the finance companies FIGGA, FINILEK, IKA, and the Brussels Intermunicipal Electricity company (IBE), is building and financing these three wind turbines. It concerns a local investment of EUR 15 million.

Furthermore, Mr De Hollander dreams of smarter solutions to use the waterways. In the early days, many cargo vessels were stocked with tree trunks to turn into paper at the Langerbrugge site. But nowadays, maybe one vessel a month actually visits the mill. Mr De Hollander hopes to increase water transport in the next couple of years, although this is difficult because of the type of cargo and the fact that the company has no dock. Even though the paper mill is situated next to the water in the port.

Digitalisation and paper

Mr De Hollander believes that "even with digitalisation, there will always be a market for paper. Even companies selling computers still use paper, for instance for advertising. We read our news on tablets and phones, work behind screens all day long, but at the end of the day we might just want something on paper – a book, magazine or newspaper – to read and relax." Yet, the new digital world is challenging. "But I dare to say that because of our location and sustainability, the very last newspaper will be made here at Langerbrugge. However, that day is still far away," concludes Mr De Hollander.

1. WWW.STORAENSO.COM



OLD PAPER IS USED TO MAKE NEW PAPER.



Fifty years Euro-Silo

A long history in the Ghent port area

This year, Euro-Silo celebrates a long history in the Ghent port area of North Sea Port. Over the last fifty years, the distribution-centre has grown from a storage capacity of 18,000t to 650,000t and stored and handled over 200 million tonnes of agribulk. A perfect moment to look back and towards the future.

Euro-Silo may have grown in size and capacity the last fifty years, reflecting on this with Xavier Van den Avenne, Chairman of the Board of Directors, it seems that not much has really changed. "Handling agribulk is a traditional business. We have been doing this for half a century now, and will be doing this for many more years to come," he says.

Looking back

The establishment of the EEC's Common Agricultural Policy in the 1960s led to an accelerated development of an agricultural industry in Western Europe, giving rise to a growing need for agribulk import-export and storage facilities in the ports. Euro-Silo was founded due to this need.

The company expanded at their location at Sifferdok in the next decennia, and added a second location at Rodenhuizedok. "In a response to the intervention of Europe between 1962 and 1992 in the agriculture markets by buying up grains at minimum prices and storing these, Euro-Silo built large flat stores as intervention silos. These stocks were used by the commission to support prices and have strategic stocks in case of poor harvests."

Mr Van den Avenne continues, "The nineties saw an evolution within the European agricultural-policy. The MacSharry reforms in 1992 completely changed these supporting mechanisms, in order to develop a freer agricultural market. This resulted in a decline of imported derivatives." After the loss of this long-term storage and traffic, Euro-Silo experienced a dip and reorganised in 2005.

The focus nowadays lies more on handling than on storage. "Of course it can be stored here, but the intent is to quickly import agribulk, tranship, and distribute the goods." Furthermore, the grain market is growing again. Mr Van den Avenne comments,

"We started with vertical silos because of grains and later went horizontal for the derivatives like soybean meal and sweet potatoes, and now grain is back. If we would expand again, it would definitely be vertical."

The raised amount of grain bulk import is mostly triggered by the development of a Bio Based Valley in Ghent, where their partners and neighbours Cargill and Alco Bio Fuel produce bio-fuels and for which Euro-Silo handles the transhipment and distribution of agribulk. Another important element is the increased grain production in Eastern Europe, from where more grains are now imported into western Europe.



EURO-SILO SIFFERDOK.



Photo courtesy of Euro-Silo

Looking forward

Frank Peeters recently started as Managing Director at Euro-Silo and he points out that more changes are on the horizon. “The world is changing, and so is the agricultural industry: stricter regulations and control regarding food and feed safety, traceability of the origin of goods, GMO versus non-GMO, the carbon footprint of crops, the debate on food for fuel... Complexity is increasing, and we cannot just put all the grain in one pile.”

“Look, there are opportunities and threats in the coming years,” he elaborates. “More and more agricultural products are

Euro-Silo

Euro-Silo is an independent multi-modal terminal for grain, oilseeds and derivatives, conveniently located of many grain processing and food and feed factories, with access for both unloading and loading of Panamax size vessels to barges, railway cars, and trucks. It offers a 650,000t agribulk storage capacity with a 40,000t/per day unloading capacity.



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EURO-SILO RODENHUIZEDOK.



Photo courtesy of Euro-Silo



FRANK PEETERS, MANAGING DIRECTOR AT EURO-SILO, AND XAVIER VAN DEN AVENNE, CHAIRMAN OF THE BOARD OF DIRECTORS.

imported from Russia and other Eastern European countries. Other regulations and restrictions are met, which means a layover of the goods might be necessary more often. This means we could expand our services, but it also impacts the optimal use of our capacity,” says Mr Peeters. “It is a challenge we have to take into consideration.”

When asked about sustainability, Mr Van den Avenne explains that Euro-Silo contributes to reducing CO₂ emissions. They take their electricity from a combined heat and power electricity plant, where the heat is used by their neighbour Alco Bio Fuel.

“But it is difficult to imply all sorts of green options. We cannot build wind turbines, because we are too close to the water where water birds breed. We also looked at solar panels, but in our industry we would have to wash these every day because of bulk handling activities. Below the line, this would cost more than it will save.”

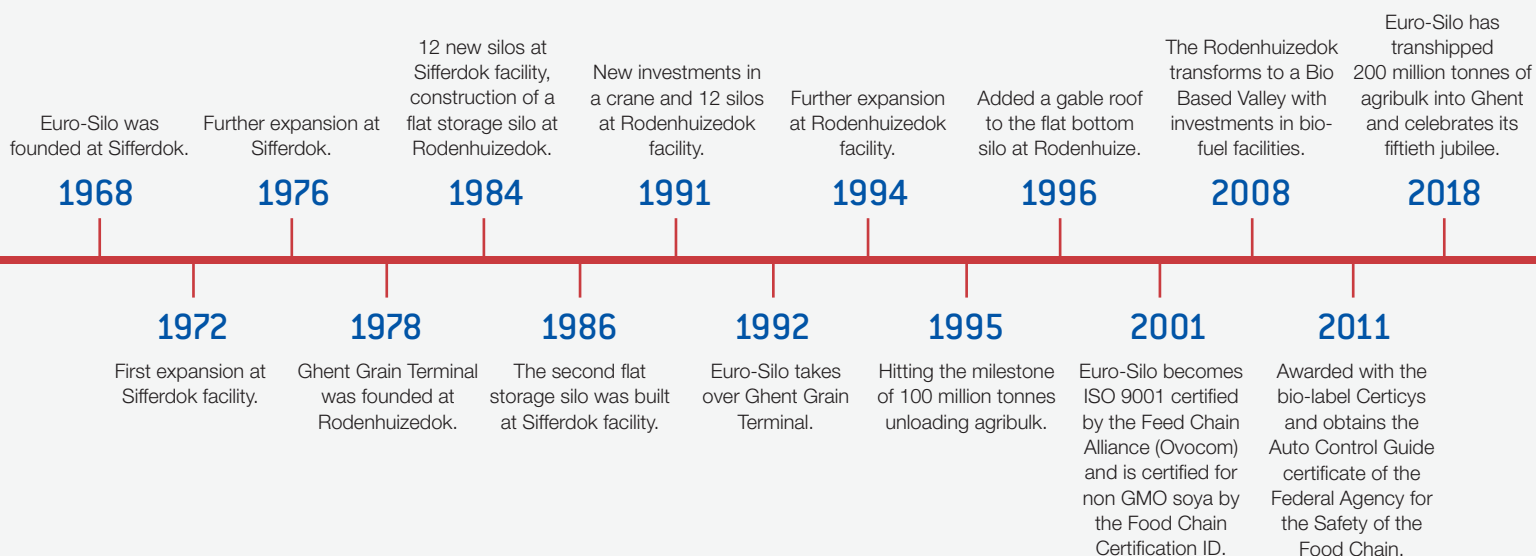
“Another current challenge results from problems on the Rhine. We see a lot of German customers that need a temporary

place to store their bulk when the water level is too low. This also means we need to be very flexible, since we never know when the storage is needed and for how long,” adds Mr Peeters. “Thanks to our flex pool, we can indeed offer this flexibility not only in storage capacity, but also in manpower.” Something Euro-Silo is looking forward to is the Nieuwe Sluis Terneuzen. The new lock will allow wider and longer vessels to sail to the Ghent port area and therefore also to Euro-Silo.

One thing is for sure, Euro-Silo will further invest in better ways to manage the silos and optimise their operations. Mr Peeters concludes, “Our customers purchase their agribulk goods from different origins and use a multi-modal way of further distribution in the logistic chain. This requires an optimal silo management.” As Euro-Silo has been doing over the last fifty years, it will continue providing specialised transshipment, weighing, storage, and multi-modal distribution services for traders of agribulk who need reliable import and export terminal services in the North Sea Port.

WWW.EUROSILO.COM

History



All weather terminal

The first ever roofed loading bay and warehouse in Ghent



ArcelorMittal Gent, the Flemish investment company 'Participatiemaatschappij Vlaanderen' (PMV), Euroports, and North Sea Port are collaborating on the first ever roofed loading bay and warehouse in Ghent: the 'All Weather Terminal' (AWT). An investment worth more than EUR 50 million.

Thanks to the new terminal, AWT GENT NV will be able to provide global logistics services to ArcelorMittal Gent and other customers, including both breakbulk storage and tranship activities. The terminal will first of all be used to store and ship finished steel coils. Twenty percent of the storage capacity can also be used for the handling of other materials such as paper or other mixed cargo.

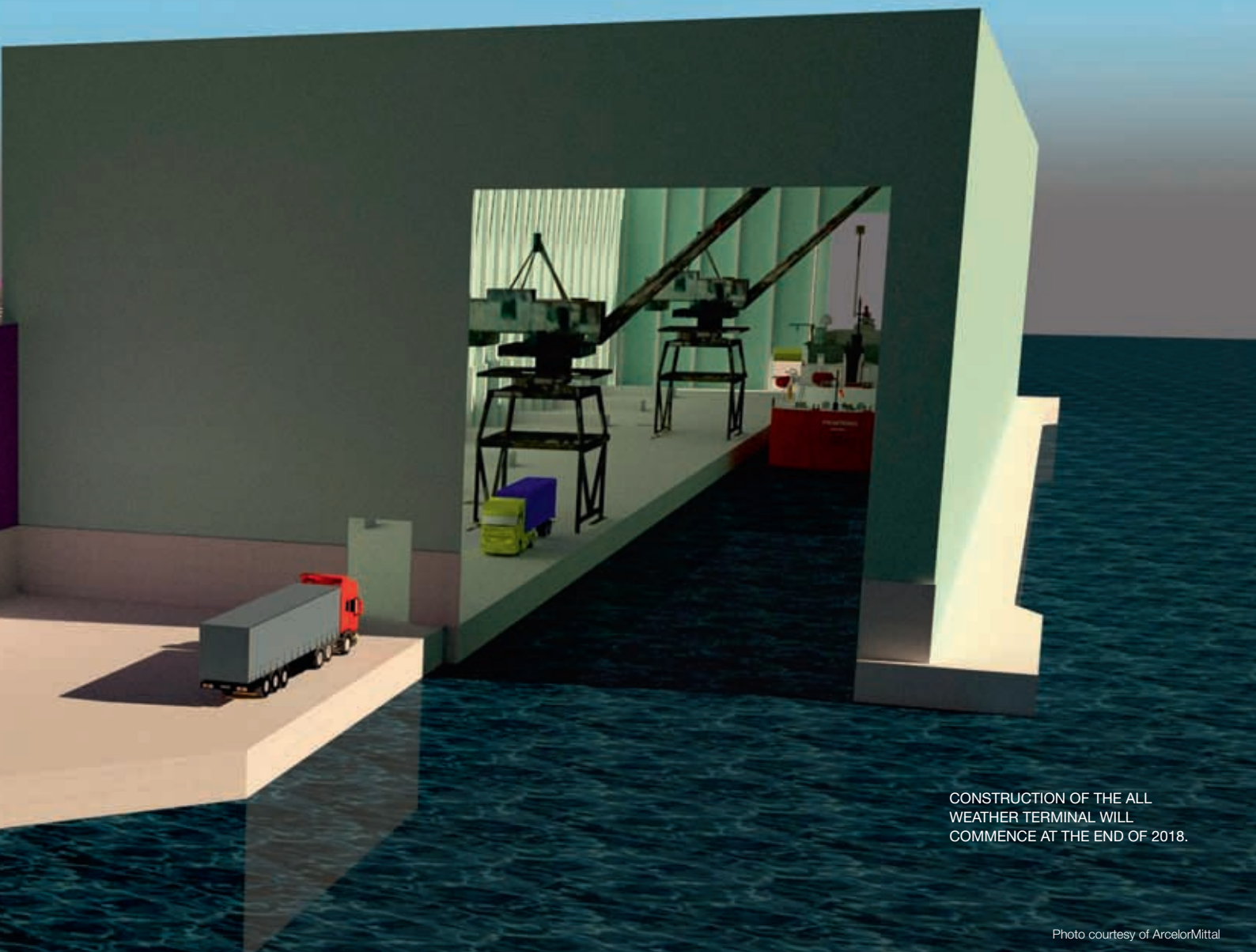
"With the facilities that AWT GENT NV will be providing for ArcelorMittal Gent via the AWT, ArcelorMittal Gent wishes to improve its services for customers even further," states Manfred Van Vlierberghe, CEO of ArcelorMittal Belgium. "Previously,

high-grade steel could only be unloaded in dry weather, but this can now take place 24/7, irrespective of weather conditions." The All Weather Terminal is an investment in sustainability and growth for all parties involved. For ArcelorMittal this is "because the higher shipping capacity per ship results in considerable savings in the number of transport truck movements (up to 25,000 trucks per year)," adds Mr Van Vlierberghe. "The AWT allows a more distributed supply of coils from the dispatching warehouse of ArcelorMittal Gent to the quay, and thus optimises the internal logistics."

Efficient bundling of logistic flows

"The very first AWT in Ghent enables an even more efficient bundling of the different flows of goods and gives companies more options in logistics," continues Daan Schalck, CEO of the North Sea Port cross-border merger. "North Sea Port wants to play a facilitating role in terms of infrastructure to make the port of Ghent as accessible as possible via rail, road, sea and inland shipping. Through investments with different partners in the All Weather Terminal, North Sea Port is helping companies in Ghent to grow in a sustainable way."

"Supporting good projects and fine businesses is one of PMV's priorities, and anchoring industrial companies in Flanders



CONSTRUCTION OF THE ALL WEATHER TERMINAL WILL COMMENCE AT THE END OF 2018.

Photo courtesy of ArcelorMittal

remains an important goal," says Michel Casselman, CEO of PMV. "With this project, PMV supports employment in the port of Ghent and is keen to realise similar projects elsewhere in Flanders in the future."

For Euroports, with its own 26 terminals in Europe, the logistic services at the AWT are a significant addition to, and expansion of, its services to the steel and metal industry. "Euroports has accumulated a good deal of experience in the steel trade and has been working with ArcelorMittal for years," adds Mr Van Vlierberghe.

Multifunctional terminal

The new multifunctional terminal is being built next to the existing mixed cargo bay of ArcelorMittal Gent and will be 240m long and 60m wide, with a storage capacity of 60,000t. The warehouse will be fitted with two tracks on the quay and will contain three fully automated travelling cranes for unloading, sorting, and loading goods. The roofed quay wall will be 200m long and the dock 25m wide. The height will be approximately 27m above water level and ships with a tonnage of up to 10,000t will be able to dock at the new quay. The pre-sorting zone will be equipped with two automated travelling cranes. Two telescopic cranes will be installed for loading and unloading ships.

The contract was signed mid-June, with the intention to start building at the end of 2018. The AWT is planned to be operational by mid-2020.

I. WWW.ARCELORMITTAL.COM

I. WWW.PMV.EU

I. WWW.EUROPORTS.COM

AWT GENT NV, a company founded by PMV and EPICo, will own the terminal. PMV, an investment company set up by the Flemish government with the purpose of investing in infrastructure for sustainable economic development, will be responsible for the design, construction, financing, and maintenance of the AWT through AWT GENT NV. Euroports will lead the maritime logistics, namely the distribution of flows from, to and in the terminal, and Stadsbader, the renowned contractor of infrastructure works and large industrial projects, will build and service the terminal. North Sea Port has granted AWT GENT NV land concessions for the construction of the terminal and they will also dredge the mooring basin

Connecting specialties

On land, over water and underground

From structural works like viaducts, bridges, and tunnels to waterworks like sluices, docks, and flood defences: without infrastructure, the position of North Sea Port as an international multimodal logistics hub would look completely different. One of the companies that built these paths on land, over water, and even underground is KWS.



RENÉ VAN PELT, MANAGER AT AQUAVIA.

All photos courtesy of KWS Aquavia



KWS'S SUBSIDIARY AQUAVIA
RENOVATING THE BRIDGE IN
TERNEUZEN FOR MULTRASHIP.

Its mission is to connect, and the company does so literally. KWS designs, constructs and maintains infrastructures, also in ports. The enterprise is the market leader in road construction and the production of asphalt in the Netherlands, and has multiple subsidiaries, each with a different specialty. M.J. Oomen, Wilchem, and Aquavia are just a few examples.

From all KWS subsidiaries, Aquavia is perhaps the most well-known of North Sea Port. Not only is the subsidiary located in the port area, it is also a much-seen player in the ports. This is because it works on many local projects, such as the construction of the renewal of the old ferry port of Terneuzen, the replacement of the roadway of the tidal bridge in Terneuzen, and the entire upkeep of the waterways of the Zeeuwse Delta.

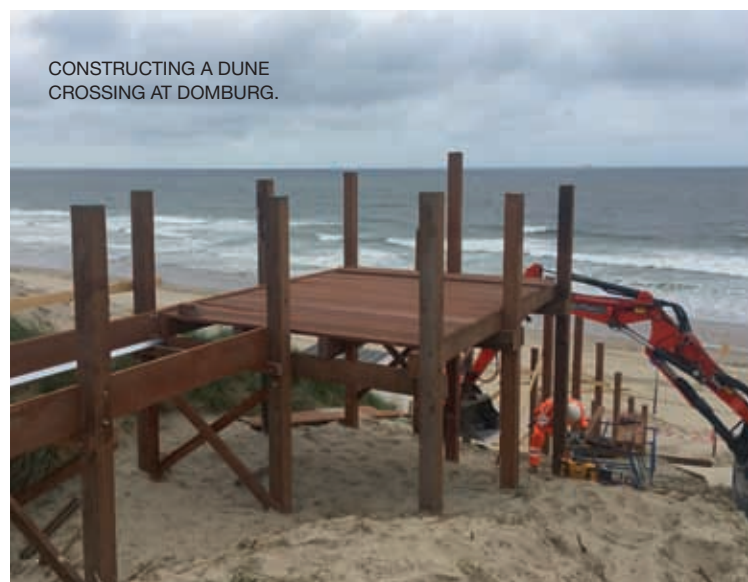
Concrete water worker

Aquavia is firmly rooted in Zeeuws-Vlaanderen. Thanks to its specialty in concrete waterworks, the company not only operates locally, but nationally as well, all from the headquarters in Sas van Gent.

When visiting Aquavia at 'Kanaaleiland', Manager René van Pelt explains he is not moving any time soon. "We like it here. Everybody knows each other and many of our employees are from here." Aquavia is becoming more locally active as well, and is granted more and more regional projects. "We also try to outsource locally, because the fact is that we need each other to grow even further."

Which is why KWS invests in local branches – with three of these in Zeeland – all over the Netherlands. The company is thus always close to its clients. Furthermore, the employees are mostly locals and therefore feel at home at KWS.

Mr van Pelt also points out that employees can grow under the wings of KWS. "People stay here because of the job opportunities that KWS offers. It is the reason why we have so many jubilees." Mr van Pelt himself has been with KWS for fifteen years now, with two years at Aquavia. "For Aquavia, it



CONSTRUCTING A DUNE
CROSSING AT DOMBURG.

INFRASTRUCTURE

is important to invest in our people as most of them are the company's calling card. They are the ones that meet our clients on a daily basis. They do not only represent the company for them, they are also our ears and eyes to learn what our clients need."

Even though Aquavia has a specialty, this in no way limits its possibilities. Being a brand of KWS, Aquavia is also part of the multinational VolkerWessels Group. Being part of these larger companies, Aquavia can scale up quickly and bring in the expertise of its fellow subsidiaries. The smaller companies also work together on bigger projects. Aquavia will, for example, embark on 44 steel bridges in Waterdunen near Breskens, together with sister company Romers Grondverzet. "That is what is so great about KWS: we not only connect literally, but also bring everyone's specialties together. At VolkerWessels, we should act independently as business units with our own responsibilities, but when necessary we can profit from the large scale of the entire group."

Surviving the crisis

It is no secret that the building industry is recovering from a crisis. During this crisis, Aquavia has shifted its core business and focusses more on the preservation and maintenance of waterworks and waterways, such as the Eastern Scheldt storm surge barrier and locks. The enterprise learned a lot throughout the years and still offers these kinds of services.

Today, Aquavia is again returning to its roots in creating and constructing new (waterwork) solutions, as business in this segment is getting back on track. With new investments in material (such as a new aluminium inspection vessel) and technologies, the company is building a strong position in the industry, with additional new projects on the horizon. Projects include the construction of a rail connection for Vlaeynatie on the Axelse Vlakte, the renovation of a wood and concrete jetty for Multtraship, and constructing a concrete pile cap at a quay for Beele as subcontractor for Van 't Hek. "That is what makes working for Aquavia so great, it is never the same," says Mr van Pelt.

Because Aquavia is involved at an early stage, it can really work together with its client to find the best solution, as well as saving costs. Thanks to its ample expertise and creative thinking, Aquavia also figures out new ways to do things.

Focus on sustainability

Less CO₂ emissions is part of KWS's interest in sustainability. To achieve this, KWS follows two routes. First of all, the company tries to be as sustainable as possible, for instance, by placing solar panels at offices or warehouses and investing in greener equipment. Aquavia uses recycled materials such as recycled concrete and FSC wood, and has refitted its work vessel with greener engines. Mr van Pelt points out that in this respect, "New technologies follow each other quickly, so it is important to only take small steps in investing in green solutions and to constantly keep on evolving ourselves." Secondly, the company also innovates in new environmentally-friendly solutions for its clients. One example is the recycled asphalt the enterprise manufactured together with Heros. This bio asphalt consists of 25% Granova, 50% old asphalt, and 25% new asphalt. Another example is the new technology of sewage waste heat recovery. Aquavia's sister company M.J. Oomen riool-



RESTORING THE GROUND SILL OF THE KRAMERSLUIZEN.



THE LOCK DOOR IS GETTING TRANSPORTED BY CRANE FOR SERVICING BY AQUAVIA.



Today, Aquavia is again returning to its roots in creating and constructing new (waterwork) solutions

en betontechniek constructed a thermal sewer in Goes that is the first in the Netherlands to recover heat from the sewage system to heat 60 apartments. This company is also building the first biological waste management facility in the Netherlands: the Biomakerij for Abdij Koningshoeven in Berkel-Enschot. And let's not forget the PlasticRoad that KWS developed in collaboration with Wavin and Total. This road is made of 100% recycled plastic and offers opportunities for further innovation, such as including solar heated roads, light poles, and traffic loop sensors. Most of all, it contributes to a brand-new technology in the road construction industry that helps to address the social problem of plastic waste.

With the increasing offshore market, Aquavia sees its activities evolving as well. "We are now getting requests for building moorings and jetties for the growing O&M activities in the area of North Sea Port. So yes, the growing offshore industry, especially wind energy, provides new opportunities for us too," comments Mr van Pelt.

Across the border

With the fusion of Port of Ghent and Zeeland Seaports, the borders are also fading for Aquavia. With orders from across the border, Aquavia will work together with colleagues on different projects in Belgium. "Of course there are still a lot of differences, for instance when looking at tender procedures. But no matter what; this is a great example of how a border area can help to strengthen the companies in it," concludes Mr van Pelt.

WWW.AQUAVIA-KWS.NL

Gentle breeze



Born and bred in Zeeland, Perry Schot, Managing Partner of F3O, is proud of the developments in the Zeeland port area.

Based in Vlissingen, Perry Schot is one of the founders of Force3 Offshore Services (F3O). Together with his two partners, he started the service provider for the offshore energy and maritime industry in 2009.

Q: Mr Schot, how did you become involved in the maritime industry?

A: In 1991, after my military service, I started to work for Shipping & Signalling Services in Vlissingen. I began as an administrative assistant and in the following nine years that I worked for the company, I had several roles and ended up as Shipping Operator. I left the company after nine years to start working for Multraship. My last function there was Commercial Manager for their offshore activities. In the years that I worked for both companies, I learned a lot about the maritime industry and I built up quite a network. I decided to leave Multraship in 2009 to start a business of my own.

Q: This new business was F3O. How did this unfold?

A: I met two people with experience in the offshore brokerage in 2009 and we began talking about starting a new company aimed at the upcoming offshore renewables market. F3O was founded in July of that year.

Q: What does F3O stand for?

A: F3O has several explanations. First of all, it refers to its three founders. Although one of the founders has resigned, the company is still owned by three individuals, as someone else stepped in. From a maritime point of view, wind force 3 also stands for a 'gentle breeze', and just like this breeze, we wanted to approach the offshore industry in a gentle but professional way, which differs from the hard selling way of doing business.

Q: How did the company develop since it was founded?

A: The company started in Oslo in 2009. We expanded to Malta in 2011 with the second, English, partner managing the office over there. This partner resigned in 2013 and was replaced by a new German partner. In the same year, it was decided to close the Maltese branch and to replace it with a Hamburg office. In 2014 we opened Vlissingen, and in 2015 our Norwegian partner set up our Dubai office. Our latest expansion is the office we opened in Aberdeen in 2017. All these changes and movements might seem a bit odd, but most of them were implemented based on demand from the market. Despite the crisis, our activities grew and expanded from the renewables market towards the marine construction, dredging, and oil & gas markets. Together with this expansion, we also became increasingly involved in maritime and related services required for the offshore industry, such as consultancy, fleet valuations, and logistics.

Q: Can you explain how these activities are divided country-wise?

A: Most of the work in Hamburg is related to renewables. Aberdeen focusses on the offshore oil & gas industry,

business in Dubai comes from oil & gas and marine construction activities. In Vlissingen, we mainly deal with towage, dredging, and marine construction (both nearshore & offshore).

Q: You already mentioned the crisis. How did Force 3 Offshore survive?

A: Honestly, the first two years of our existence were tough ones. Of course we could not afford being picky and it was a matter of working hard, making long hours, and having great support from our families. We learned from this period that every success should be celebrated with the whole team, and this is still the case today. We have a ship's bell in all of the offices and we ring it for every order granted to us.

Q: When was the moment you felt things were starting to improve?

A: This was in 2012. Although the market at that time was still suffering, the offshore wind market took off, and we noticed that people started to know about F3O and what we could offer. From that moment onwards, things went very fast.

Q: How do you view the current market situation?

A: Looking at renewables, the offshore windfarms will be constructed further at sea with bigger windmills and foundations. This requires a lot from ship owners, with vessels becoming bigger and more specialised. Located further at sea makes the use of crew tender vessels less interesting, so alternatives need to be developed, such as OSVs with Walk to Work systems. For the O&M of existing windfarms located at closer range, this is less of an issue. It is good to notice that the O&G market is recovering. This is one of the reasons we decided to start our Aberdeen branch.

Q: As an international operating company, how do you feel about the developments in the North Sea Port region?

A: As a broker, we are not really dependent on location. As long as we have a telephone and a computer, we can work from any place in the world. Having an office in Vlissingen is nice for me personally, and it sure helps to get business from this area. As I was born and bred in Zeeland, I am very proud of the developments in the Zeeland port area and of Vlissingen becoming Europe's number one offshore port for the renewable industry. I sure hope that the Borssele windfarms, which will be located more or less in front of our office, will give the region ample business.

I. WWW.F3OFFSHORE.COM



ALCO BIO FUEL IS LOCATED AT THE RODENHUIZEDOK.

All photos courtesy of Alco Biofuel

Ten years of Alco Bio Fuel

Alco Bio Fuel, located in the Ghent port area of North Sea Port, celebrated its tenth anniversary of operations. With a policy of continuous investments, Alco Bio Fuel grew from an ethanol and distiller's dried grain with solubles (DDGS) plant into one of the biggest bio ethanol producers in Europe today.

Alco Bio Fuel is a joint partnership between several Belgium companies: Alcogroup (ethanol production, distribution and trading group), Vanden Avenne Izegem (active in grain and derivatives trading, distribution and storage) and AVEVE and Wal.Agri (Belgium's largest farmer cooperative). Thanks to this collaboration, Alco Bio Fuel has all the competences in-house to succeed in the bio ethanol industry.

The plant was opened in the Ghent port area in 2008. Today, Alco Bio Fuel is one of Belgium's major biorefineries. Charles-Albert Peers, Chairman of the Board of Directors, states, "We warmly thank and congratulate everyone in the Alco Bio Fuel team. They are our best assets, making this dream a reality, day and night, for ten years already and for many years to come."

Bio ethanol

The core business of Alco Bio Fuel, the production of bio ethanol from maize, grew substantially over the past decade. Out of 600,000t of maize, the state-of-the-art biorefinery now produces 250 million litres of ethanol, which is a 66% increase compared to the initial capacity.

This growth is not only a success for Alco Bio Fuel, but also for the environment. Ethanol is a sustainable product that is used, usually blended with gasoline, to considerably reduce the CO₂ emissions of transport fuels. Thanks to constant process improvements and the incorporation of the most advanced technologies, Alco Bio Fuel has improved its ethanol to save over 80% in CO₂ emissions compared to gasoline. In comparison, this was merely 50% at the start in 2008.

More than fuel

Besides ethanol, Alco Bio Fuel produces protein-rich animal fodder from the used grain. The protein is fully recovered from the maize and concentrated into 170,000t of DDGS, which is an ideal replacement for genetically manipulated soy for cattle, pigs, and poultry.

Alco Bio Fuel does not stop there. Within the GreenCO₂ joint venture, it also purifies and liquefies up to 100,000t of CO₂ per year, which is for instance used in soft drinks, food packaging, cold chain, and the horticulture industry. Furthermore, the excess electricity produced by the cogeneration unit is injected



Strategically located

Thanks to its location at the Rodenhuisdok, a unique biofuel cluster in North Sea Port, Alco Bio Fuel benefits from some key advantages. For instance, the port provides an extensive transport network and infrastructure, links by water to Antwerp, Rotterdam, and most of Germany's largest oil refining hubs, and is situated in close range of the biggest corn and wheat producing regions in North-West Europe. Its production unit is furthermore located next to Euro-Silo, a grain stevedoring company with a storage capacity of 650,000t that the company collaborates with for the handling of grains and co-products.

DEPUTY PRIME MINISTER OF THE FLEMISH GOVERNMENT AND FLEMISH MINISTER OF BUDGET, FINANCES AND ENERGY BART TOMMELEIN WAS ONE OF THE SPEAKERS AT THE ANNIVERSARY ON 7 JUNE.



back into the grid. This surplus of reusable electricity is enough to keep the lights on in about 8,000 households.

In the future

But Alco Bio Fuel has even bigger plans. “Within a few years, we want to reach an average in ethanol CO₂ savings of more than 90%,” says Mr Peers. “We will also further develop the concept of biorefinery, by innovating and diversifying our product portfolio: glucose for bio-plastics, higher and purer protein feed for fisheries, a rectified grade of ethanol for the industry, pharmacy and cosmetics. By 2025, this will represent up to EUR 50 million in additional investments.”

Those investments are on top of the initial investments of approximately EUR 130 million that were used for the construction of the Alco Bio Fuel plant and to implement various innovations over the years, such as the cogeneration unit (Combined Heat and Power, or CHP) in 2013, the corn oil production in that same year and the CO₂ purification and liquefaction in 2016.

With all these investments and improvements, Alco Bio Fuel delivers a great contribution in the fight against climate change. “The introduction of high blends such as E85 for cars and ED95 for trucks and buses, is a necessary step forward,” states Mr Peers. “With the successful introduction of E10 [a low blend gasoline with 10% ethanol], Belgium is an example in Europe.” Deputy Prime Minister of the Flemish Government and Flemish Minister of Budget, Finances and Energy Bart Tommelein agrees. “If fossil fuels are mixed with biofuels such as bioethanol, CO₂ emissions from our transport will be reduced. In Belgium, we have already set a high standard with gasoline Euro 95-E10. With this standard, Belgium is the runner-up in



THE ALCO BIO FUEL TEAM CELEBRATES TEN YEARS OF OPERATION.

Europe, right behind Finland. We simply need biofuels in order to reach the Flemish energy targets.”

Mr Peers adds, “The EU is currently negotiating the second version of the Renewable Energy Directive (RED II). With all raw materials from European origins and high CO₂ emissions savings, ethanol is by far the most efficient and competitive product to decarbonise the transport sector on short term. We therefore ask the EU to support ethanol in low and high blends. The fastest way to reach the energy transition and satisfy drivers is a green car that combines plug-in hybrid and high-blends ethanol.”

1. WWW.ALCOBIOFUEL.COM

North Sea Port connects DFDS's new intermodal connection

With the recent acquisition of Turkish company UN Ro-Ro, Denmark-headquartered shipping company DFDS is now in a position to offer a fast connection between Sweden and Turkey.

By connecting the existing DFDS network in northern Europe with the new routes in southern Europe and the Mediterranean Sea, DFDS is capable of offering transportation of cargo from North to South, and back. All routes and terminals in this connection are in DFDS ownership and control.

The new intermodal connection offers shipping transportation from the Gothenburg – Ghent and Trieste – Pendik/Ambarli/Mersin routes. There will also be a stopover in Patras, Greece.

DFDS will use Bettembourg in Luxembourg as the continental hub for the intermodal connection, and has a solid cooperation regarding railways with CFL. Trailers are shunted from Bettembourg to Ghent over road, a second option via rail is being developed.



Delta Coastal Services expands fleet

With the addition of the shallow draught multicat DCS Adventurer, DCS now has a total of seven vessels in service. Alongside the mentioned vessels, these are the DCS Warrior, DCS Discovery, DCS Eagle, DCS Merlin, and DCS Explorer. With the expansion of its fleet, Delta Coastal Services can further optimise its crew tendering, stores delivery, survey and dredging support, and anchor handling service portfolio. Delta Coastal Services' settlement in the Vlissingen port area provides an excellent base of operation for the North Sea.

Mathias De Clercq appointed as Chairman of Supervisory Body of North Sea Port

During the first meeting of the Supervisory Body of North Sea Port, Mathias De Clercq was appointed as Chairman and Diederik Samsom as Vice-Chairman. Mr De Clercq previously worked as CEO of Ghent Port Company. The Supervisory Body consists of eight people and is established to monitor the board and important decisions taken by North Sea Port.



MATHIAS DE CLERCQ, CHAIRMAN OF SUPERVISORY BODY



North Sea Port,

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northseaport.com

Eight times the size of the Efteling's car park

C.RO Ports Vlissingen – multi-brand service provider

When driving through the Vlissingen port area, one cannot miss the terminal of C.RO Ports. Thousands of cars cover a 100ha large terrain for as far as the eye can see. Apart from this visible proof, the company itself is very modest in communicating its activities. An exception was made for PortNews.

C.RO Ports started its activities in Vlissingen in 2003 as a logistics service provider for Ford. Cars and vans produced in Europe for the UK market were transported by train and barge to Vlissingen for shipment. This is in fact still the core business of the international family-owned company with its base in Luxembourg, but as this interview will learn, there is a lot more going on at the terminal.

A very large warehouse

Terminal Manager Vincent Poppe began working for the company thirteen years ago. “When I came to C.RO Ports, the terminal was fully dedicated to Ford Europe. Simply put, we act as a warehouse for them. Albeit a very large one. We keep their new cars in stock that are mostly destined for the UK market. They arrive from various locations throughout Europe. Using our three vessels, we transport the cars to our customer's



CARS, VANS, AND TRAILERS ARE TRANSPORTED FROM VLISSINGEN TO THE UK WITH THREE OWN VESSELS.

ALL PHOTOS COURTESY OF SCHERP! FOTOGRAFIE



TERMINAL MANAGER VINCENT POPPE.

terminal in Dagenham and they are distributed into the market from there. Trailers with spare parts are shipped, along with the cars. The vessels returning from the UK take back cars, vans, and other parts that are produced over there for the European continent.”

Nine brands

CO.RO Ports has now extended its activities towards other car brands. Mr Poppe continues, “For years now, we have been taking care of countless amounts of Fords, but our aim is to be a multi-brand service provider. We currently handle around nine European and Asian brands. Approximately 50% of our stock includes Fords, the other 50% is made up of other brands.” 50,000 cars can be stored on the terminal. “To put this amount into the right perspective, this is eight times the amount of cars that can be parked at the number one theme park in the Netherlands, the Efteling, and four times the number of cars that can be parked at the Schiphol Airport parking facilities. Anyone that has ever parked a car there can imagine the vast size of our terminal.”

Vehicle preparation centre

In Vlissingen, apart from storage and transport, C.RO Ports also acts as vehicle preparation centre. “Many of our customers do not have sufficient factory space available for the finishing touch of cars,” Mr Poppe explains. “The same goes for ample car dealers. We make the cars ready for sale for these dealers.

We can equip cars with the latest software updates, we dewax, clean and wash the cars, we can supply various technical preparations, and when necessary we can repair. Finally, we organise the final pre-delivery inspection of the cars.” Other advantages for their customers are that with this service in Vlissingen, a lot of time can be saved, and flexibility towards the market is increased.

700m-long trains

Turning back to the logistics side of the activities, C.RO Ports can profit from the multi-modality of the Vlissingen port area. Mr Poppe explains, “Looking both at ingoing and outgoing transports, only a very small amount of cars are transported by truck. 28% of the cars arrives by vessel, 34% by barge, and 33% by train. We receive two to three 700m-long trains from the factories daily. 90% of the cars leaves the compound by vessel, 8% by truck, and only 2% of the cars is shipped by barge. Inland shipping for car transportation is in our opinion somewhat underestimated, which is in fact unjust as with one barge we can transport an impressive amount of 500 Ford Fiestas, which is comparable with the amount of cars that we ship on a seagoing vessel. So this is a highly efficient means of transport for us.”

The ideal location

With three ro-ro berths (one for deep sea carriers), the terminal of C.RO Ports is an ideal location for transporting any type of

LESS THAN 5% OF THE CARS IS TRANSPORTED BY TRUCK.



TWO TO THREE 700M-LONG TRAINS ARRIVE FROM THE FACTORIES DAILY.



AS FAR AS THE EYE CAN SEE.

rolling material. When looking at the handling and transport of other goods, Mr Poppe admits that this is certainly something that C.RO Ports considers every once and a while. "Our terrain, quays, and berths are perfect for the handling of containers and trucks. So of course, every now and then we look at other commodities to take care of at our terminal. Any destination in and outside of Europe can be easily reached from our ISPS-certified terminal, and although we have been dedicated to cars from the beginning and our terminal is perfectly fit for this type of cargo, we are not holding back on other products should the occasion arise."



A valuable asset

"With our staff, we can operate fast, securely, and flexibly. Our satisfied automotive customers are proof of this. Everyone on our terminal is aware of the fact that the goods they are dealing with are vulnerable and expensive. People that start working for us undergo a special training for handling the cars in the right way. But apart from this training, it is also a matter of respect from our staff towards the cars. This is also a valuable asset for other goods that we could handle in the future." As C.RO Ports has to deal with a fluctuating flow of supply and demand of cars, the company has a rather large and flexible workforce. Mr Poppe adds, "We have a permanent staff of around 65 people on the terminal every day, of which around twenty work at the office. Because of the required flexibility, this number of staff is increased with temporary workers. We can therefore have around 200 persons working on our terminal in three shifts."

Stable workforce

This type of temporary work is very popular among students and other youngsters. "There are hardly any other places where you can drive so many types of brand-new cars," says Mr Poppe smilingly. "This really makes us a unique employer. The type of work we offer is also very attractive for elderly people, such as individuals looking for a nice opportunity to remain active after retiring. As a temporary worker for C.RO Ports, they can stay in control of when they want to work, as well as how many days a week. We would like to see more older people working for us, as this will result in a more stable workforce that in its diversity better represents today's society."

1. WWW.CROPORTS.COM

Vlissingen welcomes ALL NRG

Vlissingen is attracting some of the major players in the wind industry. Siemens Gamesa Renewable Energy, Orsted and MHI Vestas are already established in this part of North Sea Port, and now the area is welcoming the Danish company ALL NRG.

ALL NRG will open a new office in Vlissingen to further support current and potential customers. "We are already a leading provider of manning and project solutions for the onshore and offshore industry and our customers, such as Orsted, Siemens Gamesa, and MHI Vestes, were telling us that Vlissingen will be the next big hop," comments Hans Schneider, CEO of ALL NRG A/S.

From the new office at the Engelandweg 25 in Ritthem, the company is already servicing several wind parks. "Vlissingen is a very important strategic location from which we can manage current and future projects, not only in the Netherlands, but also in the United Kingdom and Belgium," says Jan Nielsen, Sales Manager of Operations at ALL NRG. "We have already hired the first employees and are still hiring to complete our local staff to make sure we get the best local content working on our projects."



PETER GEERTSE (LEFT), COMMERCIAL MANAGER AT NORTH SEA PORT, WELCOMING JAN NIELSEN (RIGHT), SALES MANAGER OF OPERATIONS AT ALL NRG.

Photo courtesy of Scherpl Fotografie

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Aiming at backhaul cargo

North Sea Port is one of the leading ports for fruit and vegetables. The port areas of Ghent and Vlissingen are well known for the handling, storage, and processing of juices, and Vlissingen is the largest port area for palletised fruit in the Netherlands. For bananas, it can even be considered the leading West European hub.

One of the terminal operators dealing with the tonnes of bananas and other types of fruit and vegetables is Zoomweg Zeeland Coldstores (ZZC). Once a week, a reefer vessel arrives at the terminal with fruit from Central America. In order to optimise this service, ZZC and its partners are looking for backhaul cargo. Or as Managing Director of ZZC Henk Jansen states, "In Vlissingen, we are able to take care of a broad range of cargo that can be directly shipped. With the flexibility and speed that we offer, we can compete with the container

services as these transshipment services are usually not direct lines. So it takes more time for them to arrive at their final destination."

Without any delay

For this service, UK operator Geest Line charts five vessels from Seatrade. Walter Wildöer, General Manager of Seatrade, explains, "Seatrade and Geest Line have been working closely for several decades now. Geest Line originally chartered four vessels from Seatrade for shipping fruit from the Windward Islands and Dominican Republic to the UK. Last year, Geest Line expanded to five even larger vessels. To fill those ships, Seatrade has committed to deliver cargo of their customer base from Colombia. Every week, the line starts on the Windward Islands, sails to Turbo and Santa Marta in Columbia, and then from Manzanillo in the Dominican Republic it sails straight to Dover, UK, ending up in Vlissingen. For the customer, this is the ideal solution for a rapid supply of tropical fruit to Western Europe. A Fast, Direct and Dedicated supply chain."

Jeremy Bristow, General Manager Commercial at Geest Line, adds, "For fresh products such as bananas, time is very important. The farmers have to rely on a regular and prompt arrival of the vessels, and this of course starts with the swiftness at which the vessels can return from Vlissingen. With the port of Vlissingen located close to the North Sea, almost without tidal restrictions, and the efforts of the people at ZZC, the vessels are handled fast, enabling them to return to South America without any delay."

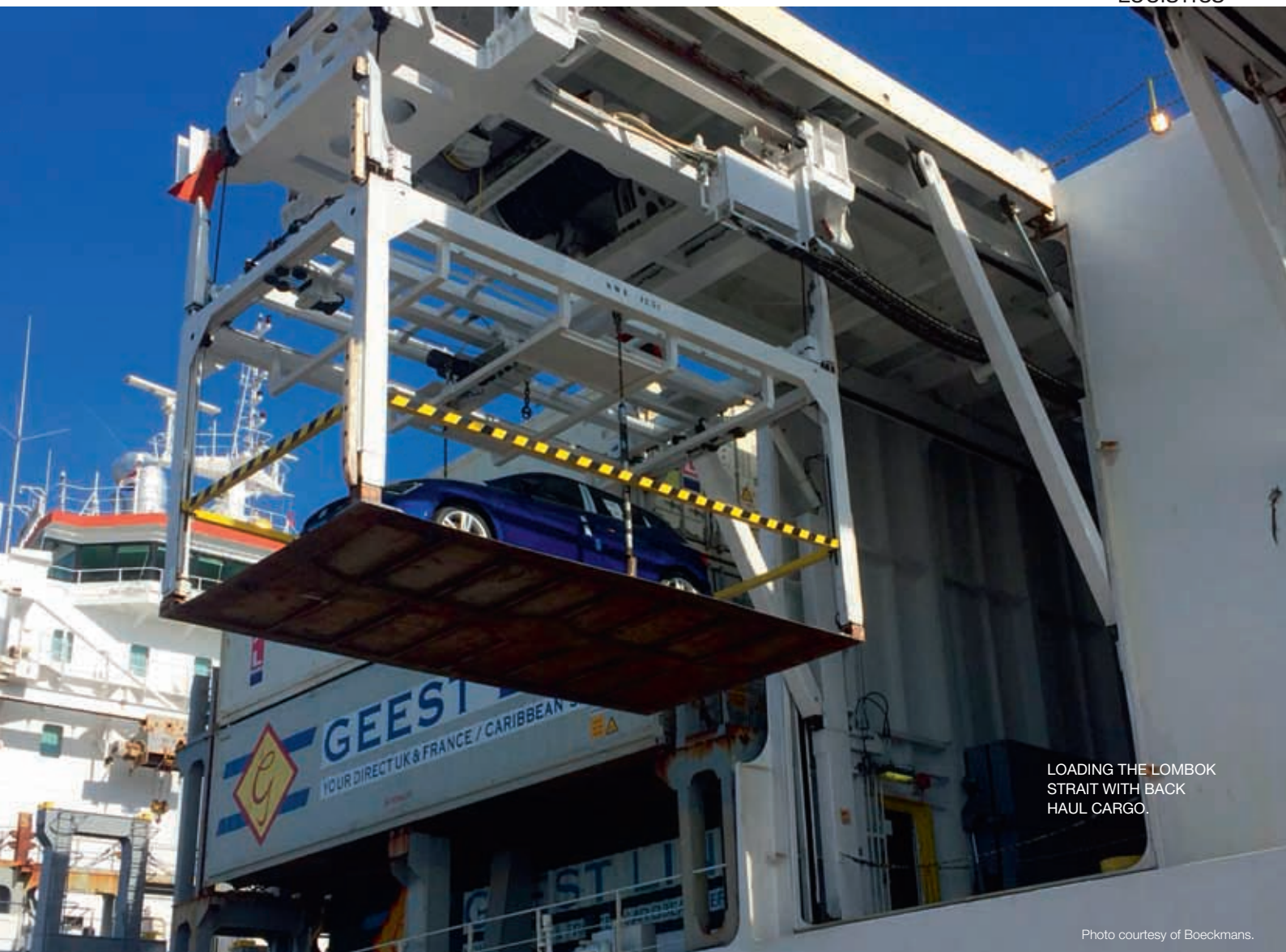
Not restricted to containers

Mr Wildöer continues, "It is good to notice that since the start of the service, our customers have been very satisfied with the way things are handled in Vlissingen, resulting in an increase of carried cargo. With taking cargo back to Central America, the so-called backhaul, we can further optimise the service, also from an economical point of view." For the Colombian market, Seatrade is collaborating with Boeckmans in the Scaldic Condor Line. An impressive amount of fresh produce such as potatoes and onions are at present already shipped, but the reefer vessels have plenty of space left for other temperature-controlled goods. Mr Wildöer explains, "The largest of the vessels can carry 200 TEU on deck and a maximum of 6,000 pallets can be stored below deck. Compared with the container lines, we have the advantage that we are not restricted to just



Photo courtesy of Scherpl Fotografie.

WITH ITS STRATEGIC LOCATION IN VLISSINGEN, ZZC CAN COMPETE WITH THE OTHER PORTS IN THE HAMBURG-LE HAVRE RANGE.



LOADING THE LOMBOK STRAIT WITH BACK HAUL CARGO.

Photo courtesy of Boeckmans.



With the flexibility and speed that we offer, we can compete with the container services as these transshipment services are usually not direct lines.”

carrying containers.” Erik Adriaenssens, Commercial Director at Boeckmans, gives an impression of the goods that can be taken back. “Apart from potatoes and onions, other types of produce such as fried potatoes can be shipped to the Colombian market in reefer containers or palletised below deck. But apart from this, we also send over new cars, vans, motor cycles, as well as equipment and spare parts for the mining industry. On deck, apart from containers, project cargo is shipped, such as yachts and components for wind turbines.”

Unique service

For the Windward Islands, which are almost without any production facilities, the imports of goods are crucial. In order to collect backhaul cargo for the isles, Geest Line is working together with shipping agent De Keyser Thornton (DKT). According to Sven de Meester, CCO of DKT, Vlissingen and its hinterland offer ample opportunities for collecting backhaul cargo. “With its excellent, congestion-free and multimodal hinterland connections, Vlissingen is a perfect hub for supplying all kinds of consumer goods, including temperature-controlled products, from Belgium, the North of France, Germany, and the Netherlands. Geest Line’s service to the Windward Islands is unique, as it is the only direct shipping line to this destination, giving it a head start on the container lines that only offer transshipment services.” For Mr Bristow, it is obvious that without the traffic from the Windward



Photo courtesy of Seatrade.

UK OPERATOR GEEST LINE CHARTERS FIVE VESSELS FROM SEATRADE.

THE LARGEST OF THE VESSELS CAN CARRY 200 TEU ON DECK AND A MAXIMUM OF 6,000 PALLETS CAN BE STORED BELOW DECK.



Photo courtesy of Seatrade.

Islands to Europe, there would be no shipment and vice versa. “Of course, without the fruit business from the isles, it would make no sense to have a liner service from Europe to the isles with backhaul. But why should we not take the opportunity to supply the isles with the goods they want? With our service, we can provide the isles with goods faster than anyone else, as it takes us only around nine days to arrive at our first port of call on Barbados.”

The only serious option

Mr Wildöer states, “Our motto for this service is ‘Fast, Direct and Dedicated’. Our service might on average seem more expensive compared with container services, but thanks to our speed, the European supermarkets receive the vulnerable fresh products much quicker, resulting in less waste caused by fruit that cannot be sold anymore. This ultimately saves money for everyone. The same obviously applies to the backhaul, albeit to a lesser extent. Competition from the US and China is fierce, too. But the more goods we can transport back, the lower the total cost of the service will become.” Mr Bristow adds, “the population on the Windward Islands is relatively poor. Because of this, the rates will remain a challenge for us. But with our service from Vlissingen, I am convinced we are the only serious option.”

Terminal expansion

Mr Jansen agrees with Mr Bristow, “We have all of the facilities available in Vlissingen and with our strategic location, we can compete with the other ports in the Hamburg-Le Havre range. Since we are acting with so many partners, the most important thing is to work together towards our mutual goal. The challenge here is to unite our at times parallel interests, but so far everyone, including Seatrade, Geest Line, Boeckmans, DKT, and the Port Authority, is very enthusiastic and cooperative in working with us.” Meanwhile, as a proof of the company’s faith in the operation’s success, ZZC is expanding its terminal with facilities for 300 reefer containers, an additional temperature-controlled warehouse, and an extra 1.4ha for the storage of backhaul cargo. If everything goes according to plan, the container terminal and the terrain for



Photo courtesy of Boeckmans.

VLISSINGEN IS A PERFECT HUB FOR SUPPLYING ALL KINDS OF CONSUMER GOODS, INCLUDING TEMPERATURE-CONTROLLED PRODUCTS, FROM BELGIUM, THE NORTH OF FRANCE, GERMANY, AND THE NETHERLANDS.

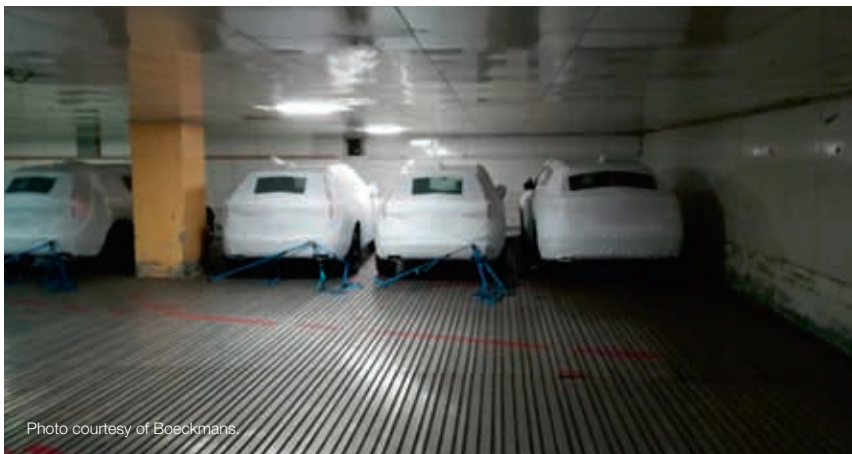


Photo courtesy of Boeckmans.

NEW CARS, VANS, MOTORCYCLES AS WELL AS EQUIPMENT AND SPARE PARTS FOR THE MINING INDUSTRY ARE SHIPPED BACK TO COLOMBIA.

backhaul cargo will be ready for use by November of this year. The new warehouse will be operational in Q1 2019.

- I. WWW.BOECKMANS.BE
- I. WWW.DKT.BE
- I. WWW.GEESTLINE.COM
- I. WWW.SEATRADE.COM
- I. WWW.ZZCOLDSTORES.COM



Photo courtesy of Johan vd Heijden

Delta Ride for the Roses

North Sea Port against cancer

Every year in June, companies in North Sea Port cycle to raise funds for the battle against cancer during the local Delta Ride for the Roses. Inspired by Livestrong, an initiative launched by Lance Armstrong, the three-day-event raises money for KWF Kankerbestrijding, the Dutch Cancer Society. The latest edition of Ride for the Roses raised a record amount of EUR 212,534 which will go towards cancer research in the Netherlands.

Vessel agency and logistics service company Supermaritime Group participated this year in the Delta Ride for the Roses for the first time. At the Supermaritime terminal in Nieuwdorp, General Manager at Supermaritime Nederland Martien Burger explains why participating is so important for them, "Earlier this year, we heard that one of our flex workers, who has been working for us for years, has terminal cancer. We are a small and close-knit team, so the news hit us hard. Shortly after we found out, we decided to join the ride against cancer. He rode along with us and we made it over the finish line as a team."

"Sooner or later, every organisation, company or corporation has to deal with saying goodbye to someone too soon," Mr Burger continues. "Why not cycle, to remind ourselves of this fact once a year." He hopes more companies will follow. "Apart from the Supermaritime team, teams from Damen, Engie, Heerema, Ovet, Trinseo, Verbrugge, and many others in North Sea Port cycle this ride as well. So you certainly are in great company."

Starting on Friday with a Ladies Ride and different courses on

Saturday and Sunday, thousands of participants of all ages and cycling levels cycle the Delta Ride for the Roses, which got its name because the organisation hands out roses at the finish line: a symbol for a tomorrow for everyone.

Delta Ride for the Roses is not a typical race. It is mainly a weekend of celebration, remembrance, and mourning, in combination with music, food, and of course cycling. From the event centre in Goes and Terneuzen, cycling courses of 25, 50, 80, and 120km long guide the cyclists through the beautiful nature of Zeeland.

Next to the Delta Ride for the Roses, the national Ride for the Roses will also be held in Zeeland in 2019. Registration opens January 2019.

Dates

- 29 December 2018 – BeachRide for the Roses
- 14 June 2019 – LadiesNightRide
- 15 June 2019 – Delta Ride for the Roses
- 15 September 2019 – Ride for the Roses

I. WWW.DELTARIDEFORTHETHEROSES.NL



Photo courtesy of Supermaritime Nederland

THE SUPERMARITIME CYCLING TEAM PARTICIPATING IN THE DELTA RIDE FOR THE ROSES.



PIPELINE
INFRASTRUCTURE AT
ARCELORMITTAL.

Pipeline infrastructure

What's the next step?

Last July a study was launched into the possible roll out of a large-scale pipeline infrastructure in the North Sea Port area. These pipelines are believed to be important to decrease CO₂ emissions in the cross-border port area and enable the transition to a circular economy.

The 'Clean Underground Sustainable Transport' study – or CUST for short – is a joint initiative of North Sea Port, Smart Delta Resources, the City of Ghent, the Provincial Development Agency East Flanders and the Province of Zeeland, the Ministry of Economic Affairs and Climate (EZK), and the Ministry of Infrastructure and Water Management (I&W) in the Netherlands. The study, which is contracted out by North Sea Port, has a budget of EUR 175 thousand and is financed with contributions from North Sea Port, Smart Delta Resources, the Province of Zeeland, the City of Ghent, and the ministries of Economic Affairs and Climate and Infrastructure and Public Works. The

Provinciale Ontwikkelingsmaatschappij Oost-Vlaanderen is also involved in the execution.

The different contributors all have ambitions in the studied area, such as the strong focus of Zeeland and Flanders on the reduction of CO₂ emissions to advance the climate and energy transition in the coming years. The study also fits into North Sea Port's Strategic Plan and is part of the 'Roadmap towards a climate neutral industry in the Delta Region' of Smart Delta Resources.

A large-scale pipeline infrastructure will be necessary for future plans of the North Sea Port area. The pipelines are required in order to set up a number of cross-border projects for transporting CO₂ and to provide an alternative destination. In addition, the pipes can be used to distribute hydrogen or, for example, to use residual gases from ArcelorMittal as a raw material at Dow Chemicals (Steel2Chemicals), which should result in a CO₂ reduction of 40% by 2030 and will strengthen industrial symbiosis.

It is envisioned that the anticipated pipeline infrastructure will also have a positive impact on the liveability in the port area, because more transport via pipelines means less transport via

road and water. The new infrastructure will furthermore attract new companies and reinforce the competitive position of the existing industry, and can thus lead to more jobs.

But the question remains how the large-scale pipeline infrastructure should be designed, and who should finance it. In the months to come, the CUST study will investigate the feasibility, design, and roll out of the required pipelines within and outside North Sea Port.

The study consists of six pointers, with the main focus on the first two:

- Current and future product streams in and around the port based on scenarios, including the need for pipeline infrastructure from these streams.
- Inventory of current and possible future traces adaptable to product streams, including estimated costs.
- Innovations in pipeline infrastructure technology that are more efficient, flexible, and sustainable.
- Laws, regulations, and spatial fitting in the roll out area.
- Possible exploitation models.
- Possible financial sources.

By creating a total picture of the required infrastructure, the study can advise on how the project should be formed and financed. There is also the hope that it will help shorten the project's long lead time. This is possible, as a complete overview of the infrastructure needed to radically enhance sustainability helps to create an effective large-scale

Smart Delta Resources

Smart Delta Resources is an initiative of eleven energy and raw material intensive companies that are looking to reduce their use of energy and raw materials by way of industrial symbiosis. Through Smart Delta Resources, companies from the chemical, steel, energy, and food industries work together to create industrial connections and develop them into interesting business cases.

network and prevent one-on-one connections.

In conclusion, the CUST-study will not determine if the infrastructure is or isn't needed, but will establish the next step towards realisation.

The provisional contract for the study has been awarded to a consortium of Royal HaskoningDHV, CE Delft, Sitech, and M-Tech. A feedback group with relevant stakeholders will be set up for the study. Companies like ArcelorMittal, Zeeland Refinery, Dow Chemicals, Engie, Gasunie, and LS Ned will participate in this group, and other contributing parties are welcome. The study should be completed by 30 June 2019.

1. WWW.SMARTDELTA RESOURCES.COM

DOW CHEMICAL.



Largest solar park in the Netherlands

Solarpark Scaldia

The largest solar park of the Netherlands will be completed in October. At the edge of the Sloehaven in the Vlissingen port area of North Sea Port, 140,000 solar panels have been installed in the 38ha Solarpark Scaldia.

As the main land owner, North Sea Port supported the development of the renewable energy project. "As a port, we are proud of this development and impressed by the professionalism and effectiveness of the Solarpark Zeeland developers. We wish the operator and investor ib vogt lots of sunny Zeeland hours," says Peter Geertse, Commercial Manager at North Sea Port.

Innovative panel placement

The panels at Solarpark Scaldia are positioned in an innovative east-west direction, which optimises land use and creates an improved daily generation profile, thus ensuring optimal cost-effectiveness. The panels are located next to several wind turbines, and underneath a high-voltage line in a cable and pipeline corridor, another clever use of land, on a total surface area of 38ha around the Sloehaven.

In both surface area and capacity, Solarpark Scaldia will beat

SunPort Delfzijl, which was previously the largest solar energy park in the Netherlands. "It is great that the city with the most hours of sunshine can also build the largest solar park. The largest offshore wind port can now largely run on solar energy. That is really sustainable," said John de Jonge, Alderman of the Municipality of Vlissingen.

Solarpark Scaldia has a capacity of 54.5 Megawatt peak (MWp) and an average production of 51,000 Megawatt hours (MWh) per year, which can provide enough energy for more than 14,000 households. During its thirty-year lifespan, the solar park is expected to prevent the emission of over 738,000t of CO₂. The completion of the project will help the Netherlands in its transition towards renewable energies, and in obtaining its goal of 37% sustainable energy sources for electricity consumption by 2020.

Complex development process

The preliminary land agreement was signed with North Sea Ports (then: Zeeland Seaports) and two private landowners back in 2015. The building permit was obtained by mid-2016, after which a fifteen-year Stimulation of Sustainable Energy Production (SDE+) award was granted to the project. Hans Hoven, Director of Solarpark Zeeland, initiated the development of Solarpark Scaldia. The development of the project was later taken on by German-based company ib vogt, which is advised by Netherlands-based company Solarfields and HSH Nordbank.

THE CONSTRUCTION OF THE SOLARFIELDS STEP-BY-STEP.



All photos courtesy of SolarFields

LAST AUGUST, THE INSTALLATION OF THE SOLAR PANELS BEGAN.



“ The largest offshore wind port can now largely run on solar energy. That is really sustainable.

Due to the solar park's location, two thirds of which is located in the municipality of Borsele and the remaining third in the municipality of Vlissingen, and because the panels were built underneath TenneT high-voltage cables and a pipeline corridor, the development process proved to be fairly complex. This was quite a logistical challenge too, as the expanse area is roughly six kilometres long.

Starting operations

Things started happening rapidly in early 2018. Network manager Enduris started the construction of the network

connection in February. Upon completing the financing, EPC contractor and current owner of the solar park, ib vogt, began with the construction of the plant in May.

Completion of the solar park is planned in October, after which the output and the Certificates of Origin (GvO) will be sold to France's Engie SA in a seventeen-year power purchase agreement (PPA). ib vogt will provide O&M services after commissioning the plant, while Solarfields Nederland will provide technical and commercial asset management after commissioning.

Everything went according to plan during the construction. The beautiful weather of last summer was definitely an advantage for mounting the panels and completing the park this month according to schedule.

I. WWW.SOLARPARKZEELAND.NL

I. WWW.SOLARFIELDS.NL

I. WWW.IBVOGT.COM



The new Port House in Ghent

Restoring the ‘Gildehuis der Vrije Schippers’



All photos courtesy of Callebaut Architecten

Following the merger of the Port Authorities Zeeland Seaports and the Port of Ghent, the two subsidiary companies will move to their new corporate headquarters in the former city hall of Sas van Gent, in the heart of the port area. But this does not imply that North Sea Port will also move out of the Ghent centre.

On the contrary, the famous and protected ‘Gildehuis der Vrije Schippers’ (or Guild House of the Free Sailors) at the Graslei 14 is currently being restored to its former glory in order to function as the new Port House in Ghent. The building dates from 1530 and will function as the Port’s international showcase, welcoming visitors from all over the world.

At the end of 2011, North Sea Port (then: Port of Ghent) acquired the Guild House, which lies at the origin of the port area of Ghent. From the eleventh Century onwards, trading activities increased along the riverbanks of the Lys, and the area of the Graslei and Korenlei became the city’s port. In those days, Ghent raised grain stock duties, which meant that all grain imported into Flanders had to pass through this inland port and each skipper had to leave behind a quarter of grain as payment. Consequently, the Graslei and Korenlei, together with the Korenmarkt, became the centre of the grain trade in Flanders. Only the skippers with their own businesses on location, ‘the Guild of the Free Sailors’, could waiver the grain stock duties.

The location of the new Port House is thus particularly interesting. “We started at the Graslei, expanded to the Dampoort, to the old docks, then to the North dock, the Siffer dock, the Mercator dock, and the Rodenhuize dock and so on, in the direction of Zeeland,” says Daan Schalck, CEO of North Sea Port. “And now North Sea Port returns to where it all began.”

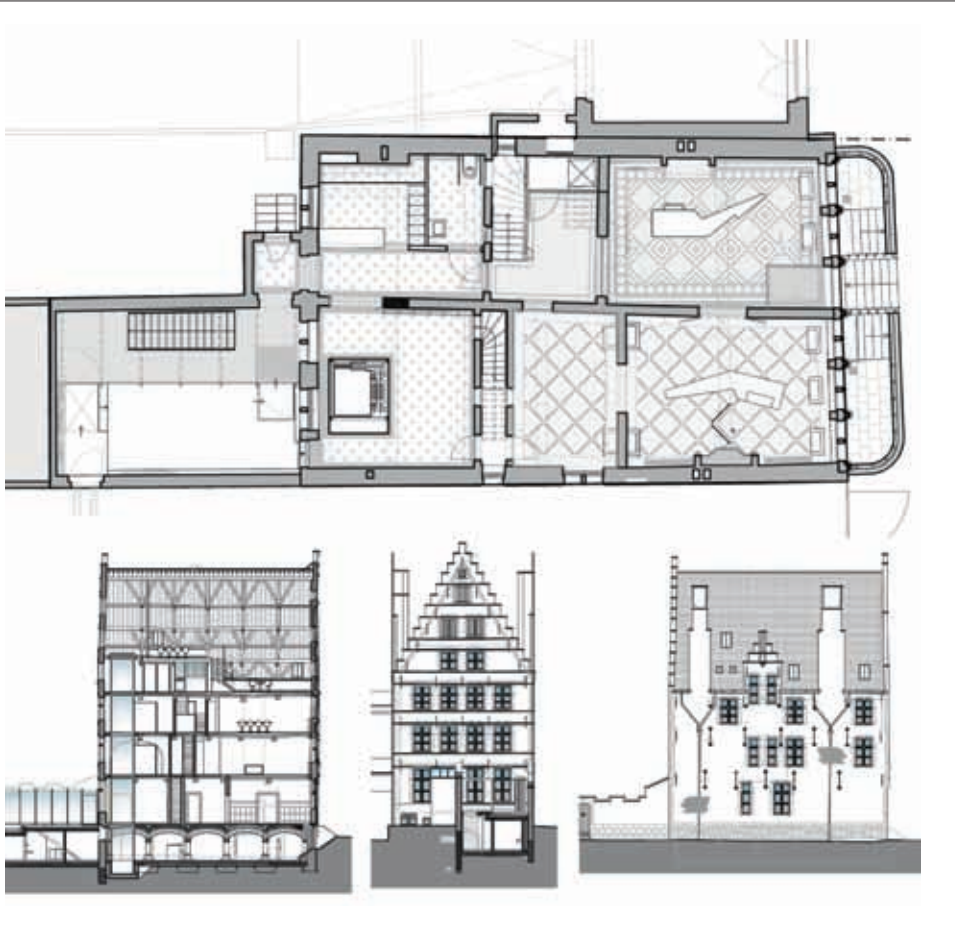
Before the new Port House will be fully operational, it must be fully restored. Restoration started on 1 March 2016, and both the interior and exterior have now been restored to their former glory. Modern facilities such as central heating, ventilation, electricity, elevators, and sanitation have also been added.

The beautifully restored exterior was revealed last July. The façade is a perfect example of Brabantian gothic architecture and entirely made from Balegem stones. Wouter Callebaut from Callebaut Architects explains that, “the imagery on parts of the façade was eroded, so we had to reconstruct the exterior from old photographs”. Original Balegem stones were used to restore and replace any broken and missing pieces.

The result is stunning. Jan Lagasse, CEO of North Sea Port, was



ERODED STONES WERE REPLACED BY ORIGINAL BALEGEM STONES.



BEFORE



AFTER

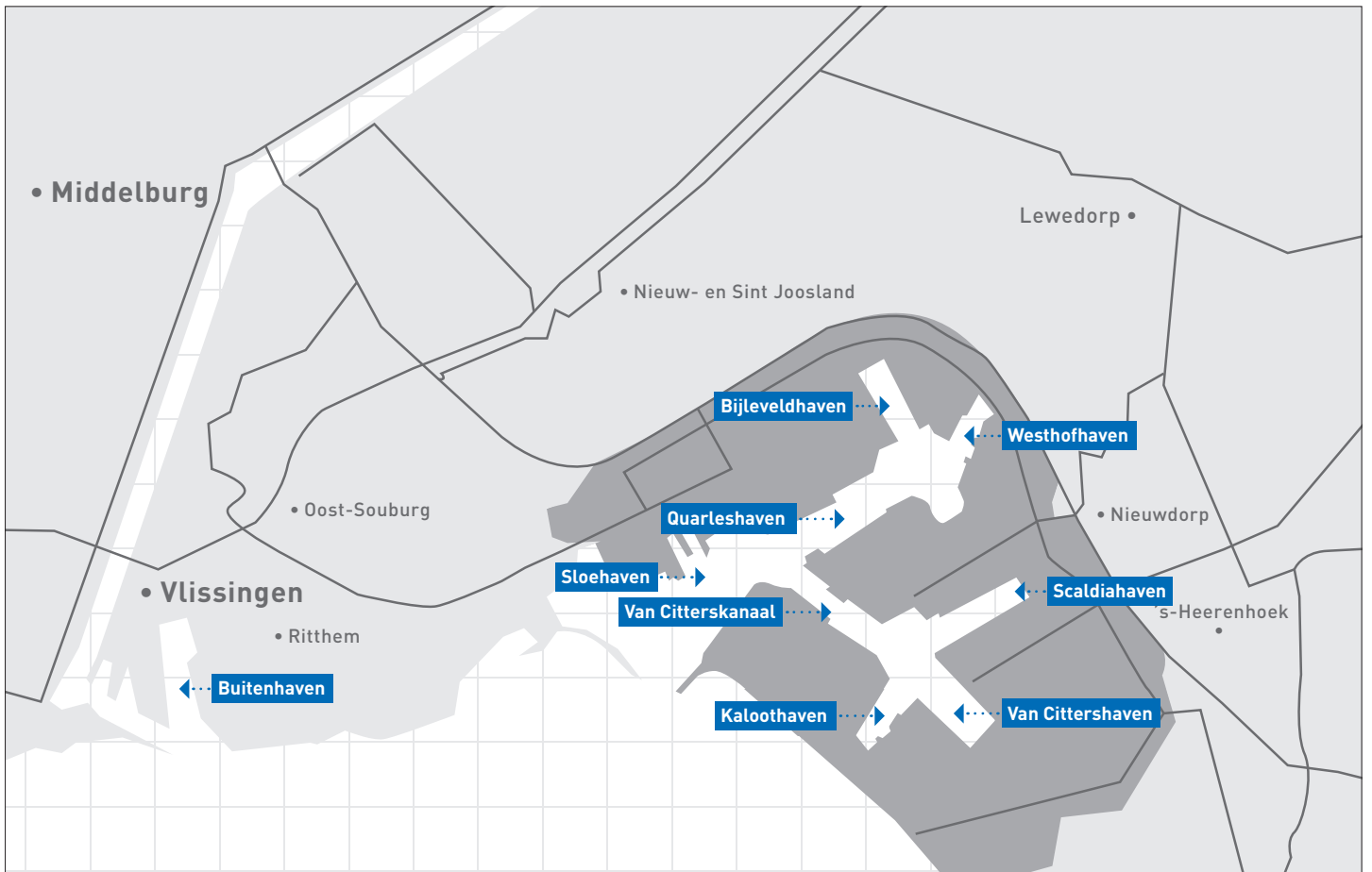
fascinated at its disclosure. "It's such a magnificent façade. Considering its historical context, and the fact that it lies in one of Ghent's most beautiful locations, one cannot help but get a little emotional," he said in an interview with HavenTV. The interior of the old Guild House has a typical neogothic design and is also being renovated by Callebaut Architects. The building will be multifunctional upon its completion. Events can be hosted in the basement, the first and second floor will include flexible workstations and several conference rooms where (inter)national players, investors, and government officials will be welcomed, and the attic will be suitable for seminars.

The ground floor will open its doors for the locals, guests, and tourists. It will feature an exhibition area, promoting and informing visitors about port-related topics and job opportunities. "This is the ideal place to host international guests", says Mr Schalck. "Its international appeal can also be attributed to the Graslei, and I'd personally rather be here than at our HQs." The Opening of the new Port House is expected in the spring of 2019, with a special exhibition of the Ghent Port area.

I. WWW.NORTHSEAPORT.COM

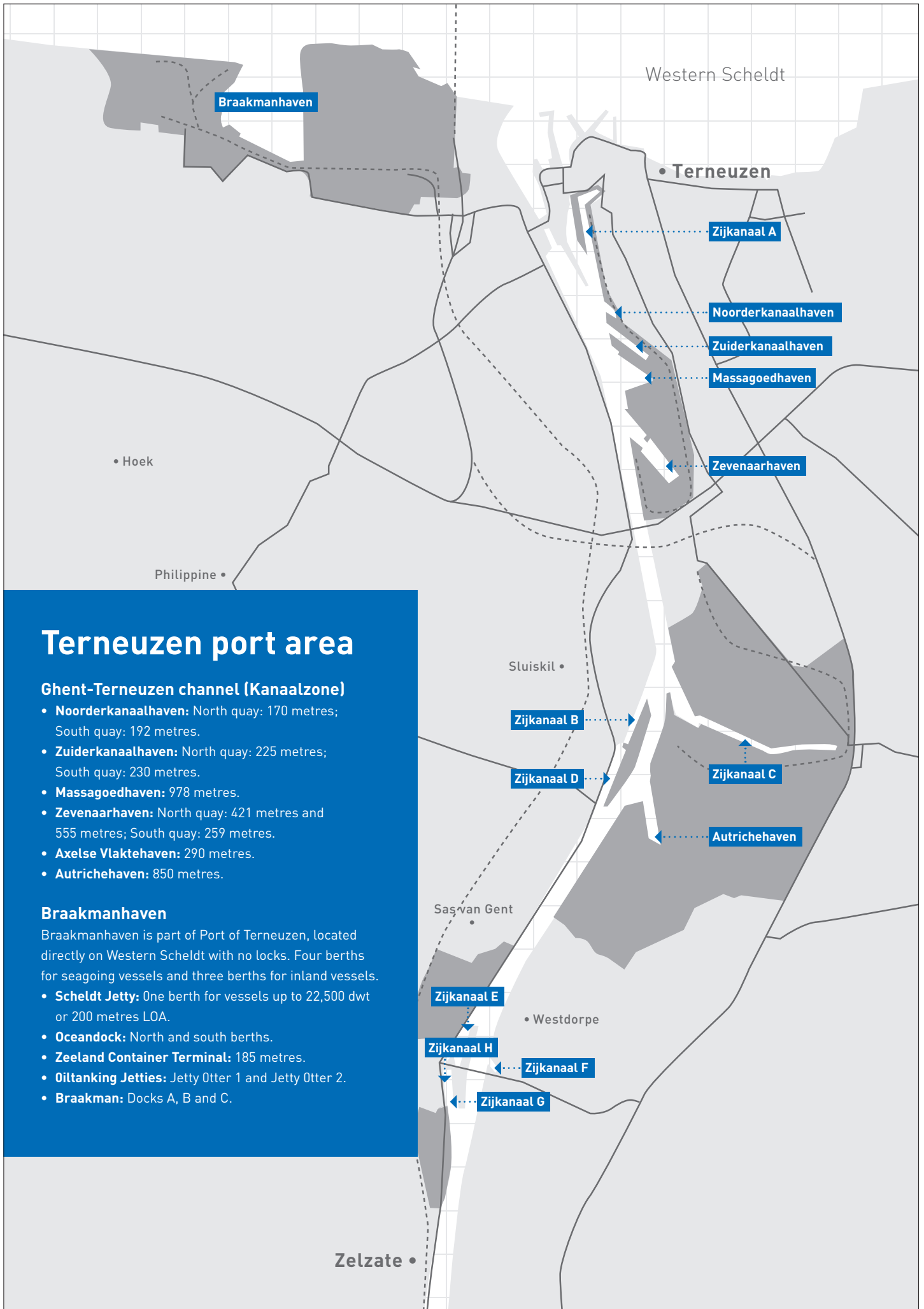
ARTIST IMPRESSIONS OF THE INTERIOR DESIGN.





Vlissingen port area

- **Sloehaven:** Suitable for all kinds of transshipment including LPG and chemical bulk 920 metres of quay. Cobelfret RoRo jetties: Four berths.
- **Bijleveldhaven:** 1,980 metres of quay. North bank is 300 metres long.
- **Westhofhaven:** 475 metres of quay. Can accommodate largest reefer vessels. East side jetty for discharging peat and general cargo quay.
- **Kaloothaven:** 1,130 metres of quay. Two jetties on south bank, one for inland barges.
- **Scaldiahaven:** Over 1,700 metres of quay. South side used by Verbrugge for handling and storage of cellulose and metals. Transverse quay is 250 metres long.
- **Van Citterskanaal/haven:** Six jetties for inland vessels and coasters. On south bank, 275 metres. On north bank, 200 metres. Heerema quay: 230 metres and 220 metres.
- **Quarleshaven:** Extension of Sloehaven to NNE, 315 metres of quay. Set of two mooring buoys on east bank with a span of 320 metres. Zalco quay: East bank, length of 150 metres. Vopak Terminal Vlissingen: Four LPG jetties.
- **Zeeland Refinery Pier:** Located on Western Scheldt. Accommodates tankers up to 100,000 dwt with maximum LOA of 280 metres.
- **Buitenhaven:** Located outside lock system with direct access to sea, 300 metres of quay. Northern basin has area for coasters and lighters. Vesta also operates an oil jetty for tankers.



Terneuzen port area

Ghent-Terneuzen channel (Kanaalzone)

- **Noorderkanaalhaven:** North quay: 170 metres; South quay: 192 metres.
- **Zuiderkanaalhaven:** North quay: 225 metres; South quay: 230 metres.
- **Massagoedhaven:** 978 metres.
- **Zevenaarhaven:** North quay: 421 metres and 555 metres; South quay: 259 metres.
- **Axelse Vlaktehaven:** 290 metres.
- **Autrichehaven:** 850 metres.

Braakmanhaven

Braakmanhaven is part of Port of Terneuzen, located directly on Western Scheldt with no locks. Four berths for seagoing vessels and three berths for inland vessels.

- **Scheldt Jetty:** One berth for vessels up to 22,500 dwt or 200 metres LOA.
- **Oceandock:** North and south berths.
- **Zeeland Container Terminal:** 185 metres.
- **Oil tanking Jetties:** Jetty Otter 1 and Jetty Otter 2.
- **Braakman:** Docks A, B and C.

Ghent port area

Zeekanaal Ghent - Terneuzen: The depth of water in the canal is 13.5 m and there are no currents or tides. Inside the port there are five large docks and three smaller docks, offering a total quay length of 31 kilometres for vessels up to 92,000 DWT. 22 kilometers with a depth of water of at least 12.5 metres. All the docks have direct access to the canal.

- **Kluisendok:** Is a brand-new dock. Has a total quay length of 4,300 metres with a depth of water of 13.5 metres and a width of 350 metres.
- **Rodenhuisdok:** Quay on the southern side is 790 metres long with 13.5 metres of depth. Width of 270 metres.
- **Mercatordok:** Quay is 1,800 metres long with 13.5 metres of depth. Width of 250 metres.
- **Alphonse Sifferdok:** Quay is 4,800 metres long, with 12.5 – 13.5 metres depth. Width of 300 metres.
- **Grootdok, Noorddok, Middendok and Zuiddok:** Total quay length of 6,855 metres. 6,575 metres with 13 metres depth of water, and 280 metres with 8.5 metres depth of water.
Width: Grootdok: 150 metres
Noorddok: 200 metres
Middendok: 250 metres
Zuiddok: 220 metres





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	Municipality of Vlissingen	www.vlissingen.nl					■
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	Ovet B.V.	www.ovet.nl			■	■	
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R	Rabobank Oosterschelde	www.rabobank.nl/oosterschelde				■	
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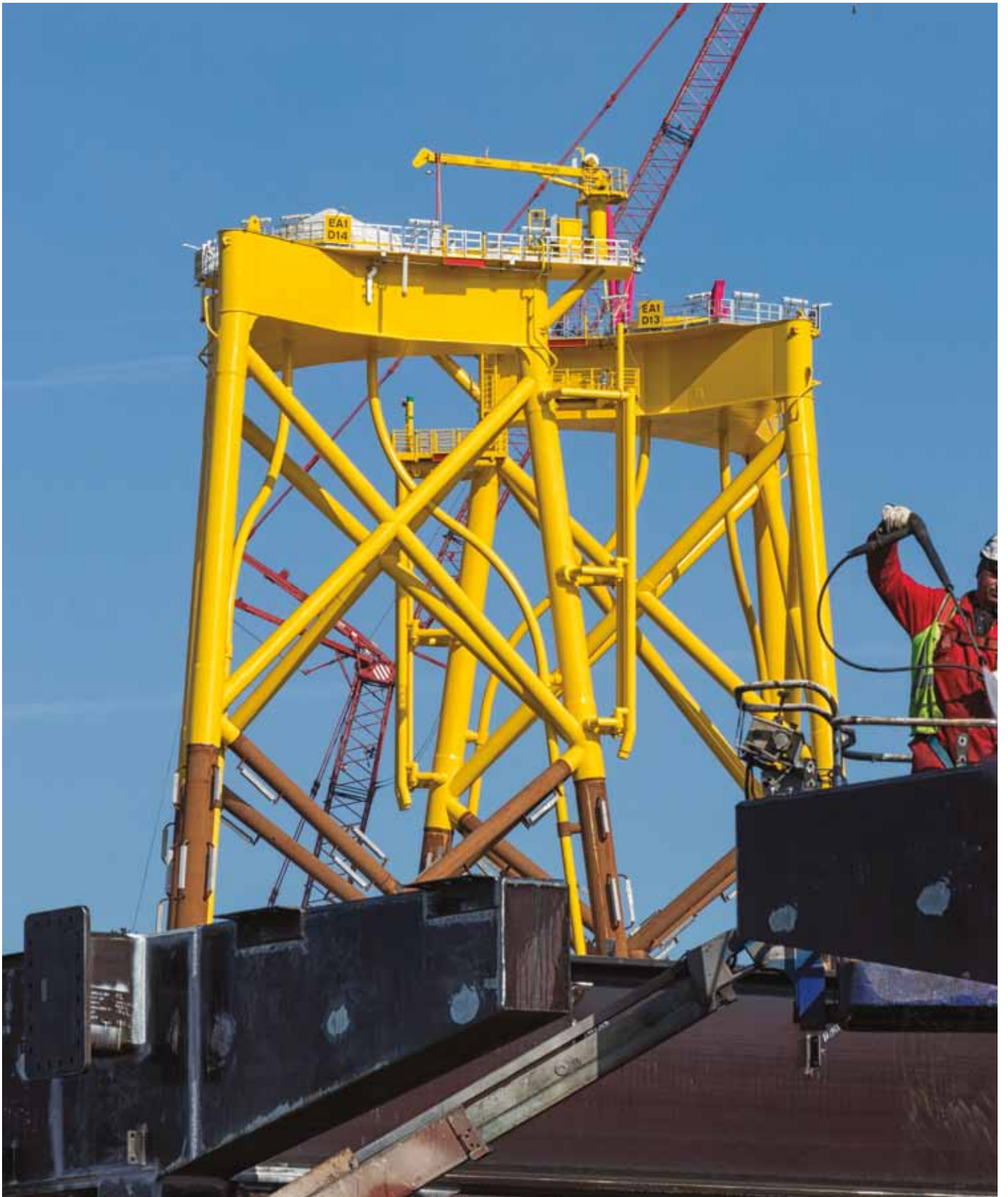


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