

CONVERSION FROM COAL INTO A MULTI-PRODUCT TERMINAL DRIVERS BEHIND THIS/MANAGING THE PROCESS

DBTG, Southampton, October 10 2019





- 1. OBA at a glance
- 2. Market dynamics
- 3. Political dynamics
- 4. Mission-vision-goals
- 5. Impact conversion





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OBA AT A GLANCE

A leading dry-bulk terminal in Amsterdam with resources available for further growth and diversification





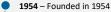
Ownership:

HES International – 75% Oxbow - 25%

Headquarters:

Amsterdam, The Netherlands

Key developments:



2014 - HES International owns 75% and Oxbow via OVET Holding owns 25% of OBA

- 2016 Diversification process started with additional minerals and agricultural products handled
- 2019 OBA started operations of shed 6, covered storage for agri products

Company overview

- OBA is the largest dry bulk terminal in the Port of Amsterdam (PoA) and offers services to seagoing vessels, barges, trains and trucks
- OBA can handle vessels up to a draft of 17,8 meters and is able to unload vessels quickly and efficiently
- OBA serves clients in the energy, steel, feed and construction sector
- ISO 9001/14001 and GMP certified
- Land can be made available for additional (non-coal) differentiated bulk and processing business

Surface area:	70 ha
Open storage:	655,000 m ²
Covered storage:	181,000 m ³
Quay:	1.5 km (deep sea quay)
	Max beam: 45m
Draft:	17.8 m (draft through locks: 13.75 m)
Capacity:	100,000 t/d
Annual throughput:	19 million tonnes
FTE:	124
Maximum vessel:	170Kt



Geographic location









AERIAL VIEW | Terminal Facilities







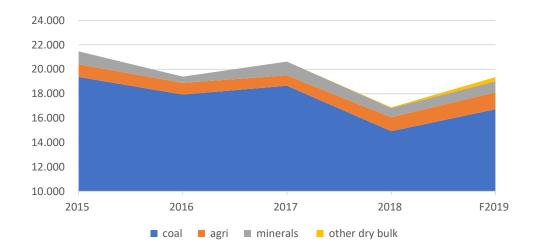


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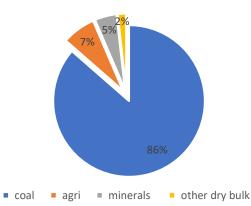
MARKET DYNAMICS



ttl throughput in/out x 1.000ton



F2019 ttl throughput



Major Markets served:

- Coal: Steel Industry, Power generators and special coal appliances
- Agri Bulk: Feedstuff components (Livestock sector)
- Minerals: Chemical & Building Industry and Civil Engineering
- Other dry bulk: Re-cycling, Steel Scrap and Waste Wood

Key issues effecting these markets:

- Coal: Phasing-out schemes for coal fired power generation and CO2 pricing policies largely eroding overall coal burn.
- Agri Bulk: Relative stable consumption pattern (notice GHG: Nitrogen) and focus on indoor storage.
- Minerals: Growth potential but smaller volumes (containerized)
- Re-cycling: drive for circular economy.





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POLITICAL decision around coal in the Netherlands and Germany will influence activities of coal handling terminals in the next decade



- The Amsterdam coal fired power station stops operating latest 31st Dec 2019.
- Announcement by the The Port of Amsterdam that it intends to stop handling coal shipments by 2030 as part of a new comprehensive sustainability plan
- In February 2019 a multi-stakeholder coal exit commission set up by the energy ministry suggested a pathway to a phase-out of the fossil fuel by 2038 in Germany



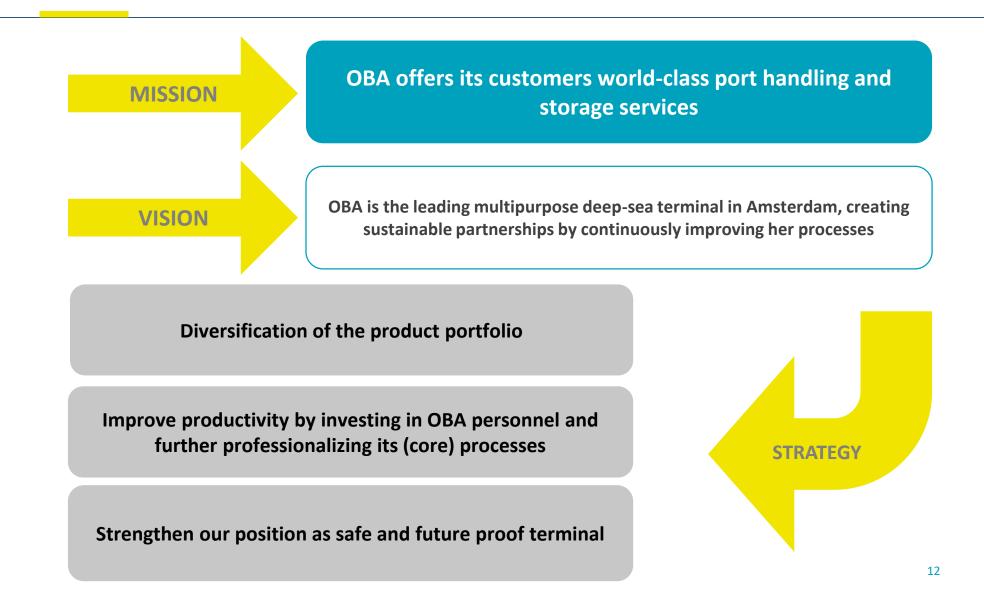


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MULTIYEAR PLAN OBA

OBA's mission, vision and strategy provide a solid path going forward....









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- 1. Terminal movement from black to white
- 2. Make current equipment suitable for other purposes
- 3. Quay construction
- 4. How to move products from quay to rear of the site and back.
- 5. Increase of contractors on our site and impact the permanent staff
- 6. Increased road transports on terrain
- 7. Impact on wastewater management





EQUIPMENT WILL BE REDUNDANT or has to be changed for other purposes

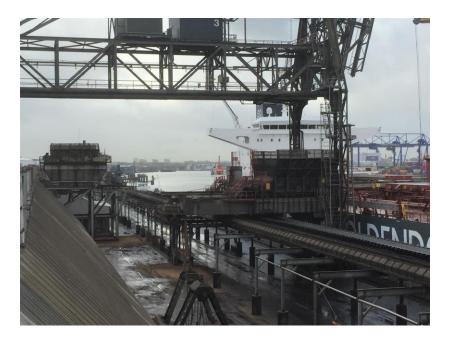


Handling

Most of our current equipment (cranes , belts) is designed for the handling of coal. In future this equipment will be redundant or has to be changed for multipurpose use. At this moment we only have one unloader suitable for these products

At the loading side, we also have to modernize and increase the loading capacity





EQUIPMENT WILL BE REDUNDANT or has to be changed for other purposes



Storage

Most of the new products do not allow for outside storage. GMP and ATEX requirements.

Priority

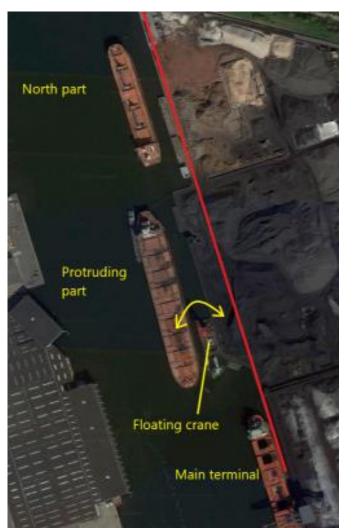
Increase the dry storage facilities at the side (new sheds, enlarge existing sheds) Overhaul, if possible, the other ship unloaders

Design criteria No cross contamination Easy to clean between products Easy to change between products



PLANS FOR CONSTRUCTION OF A NEW QUAY are being developed





Main terminal:

Depth 15 m, ship berth direct on quay

Protruding and north part

- Depth at quay 10 m, ship berth on bollards
- Depth at bollard 15 m.
- Loading and unloading with floating crane

Difficulties with new materials and loading / unloading with equipment on quay.

- Large ships out of reach on bollards
- Quay not designed for loads of mobile loading / unloading equipment.

Consideraties:

New quay, full length 15 m





HANDLING

OBA has many experience with moving coal all over our site. Personnel can do the job with the eyes closed. Al the equipment and contractors were selected for this purpose. Very efficient and at minimal cost

Now we have to deal with new materials and smaller quantities. At the start, also with short time agreements. So minimum room for investing in special equipment.

PROBLEMS:

- No experience
- No standard operations
- Not the dedicated equipment.

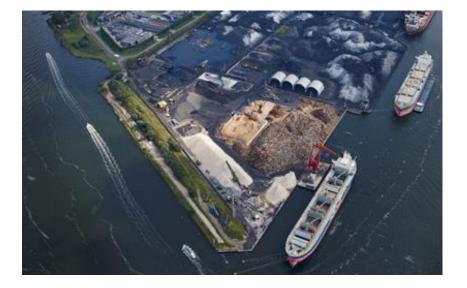
THIS MEANS:

- Learning at the Job
- Use of the equipment we have
- Keep improving, think out of the box



THE INCREASE OF CONTRACTORS ON THE OBA SITE is having an impact on staff





With the introduction of new materials, we also introduced new contractors on our site. These contractors are sorting the materials or shredder the materials. (Scrap, anthracite, wood) They need a location on the site. Office and work area, power and access.

At the start they were seen as "intruders" on our site. Also suspicion: they are not allowed to do our job. Unloading and loading of ships. Misunderstandings and hesitation. Questions about responsibility. First line maintanance

Now the see the value of these contractors. There is corporation and improvement of handling the material.



Most of the new materials are transported to the site by trucks. Scrap and waste wood. It is handled and processed by the contractor and stored for loading on vessels.

This increase of road transport meant we had to provide a suitable access to the north of the site and deal with the daily problems with new people on the site.

The area used to be long term storage with minimal movements and OBA personnel.

Now we have movement of dozens of trucks a day, new people with every truck, contractors' personnel, heavy equipment, transport on site.

Together with the contractors we are now working on a new lay out and road map. This to improve the flexibility of the site, and make the best use of the area, equipment ant routing. In this group we also look at the best equipment for the job.

IMPACT ON WASTEWATER MANAGEMENT





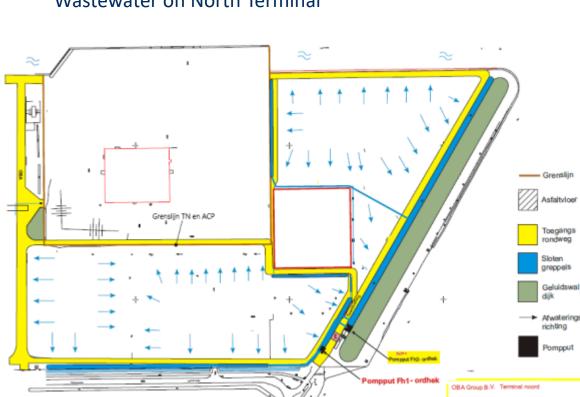
Current wastewater management on the main terminal.

On the main terminal we have two systems. One for the coal storage Water flows to the top of the picture.

One for the agri sheds. Water flows to the right Of the picture.

IMPACT ON WASTEWATER MANAGEMENT





Wastewater on North Terminal

Current wastewater management on the north terminal was only for coal storage. The waterflows to the bottom of the picture and is handledby the treatment og the main terminal.

For scrap, wood(chips) and other material. We have to design and build in separate water systems and treatment facility's

Oil and crease separation. Heavy metals. Chemicals **Organic prolusion** ??

So with all new materials, new demands for the water treatment.





TERMINAL NORTH



