

# SAILING CONDITIONS

## ABOUT LYNETTEHOLM

On 4 June 2021, a broad political majority in the Danish Parliament passed the act on the construction of Lynetteholm. Lynetteholm will be constructed as a peninsula between Refshaleøen and Nordhavn with a coastal landscape facing Øresund, which will help protect Copenhagen from storm surge from the north. CPH City & Port Development will create the land area on Lynetteholm by utilising - in other words, recycling - surplus soil from Copenhagen and construction projects in and around the city.

Prior to Parliament's decision to construct the land area of Lynetteholm, environmental impact assessments were drawn up, illustrating how it is believed the construction of Lynetteholm will impact the surrounding environment, including sailing conditions. CPH City & Port Development will continuously monitor the construction work, thereby ensuring all environmental considerations.

The signatory parties to the agreement decided to initiate a strategic environmental assessment (SEA) of the future plans for Lynetteholm, which have not yet been politically decided.

## KRONLØBET - NEW APPROACH TO, AND EXIT FROM COPENHAGEN

Today there are two fairways in and out of Copenhagen Harbour in the north. Kronløbet for commercial sailing and Lynetteløbet for leisure sailing. The creation of Lynetteholm as a peninsula in extension of Refshaleøen entails the closure of Lynetteløbet. In the future Kronløbet will

be shared by leisure and commercial sailing (see the map).

Lynetteløbet will be kept open as long as possible, but is expected to close in the autumn of 2022. From around 2026, small pleasure craft such as kayaks, rowing boats and dinghies will also be able to use a new channel through Nordhavn to sail between Copenhagen Harbour and Øresund. The channel will run between Orientbassinnet and Kalkbrænderihavnen. Nor, in the long term, will container vessels use Kronløbet. The container terminal, which is currently located on Levantkaj, will move to Outer Nordhavn.

## AN IMPROVED KRONLØBET

Kronløbet will acquire a funnel shape with Lynetteholm on the east side and Nordhavn on the west side. As a follow-up to initial public consultations in 2019 on Lynetteholm's environmental impact report, CPH City & Port Development adapted the design of Lynetteholm to ensure sufficient space for both leisure and business vessels to sail through Kronløbet. For one thing, the entrance has been made wider at the narrowest point and will, as a result, be 200 metres, whereas today it is 150 metres. In this context, the tip of Levantkaj in Nordhavn will be removed and, at the narrowest points, the edge of the quay will be given a stone surround to break the reflected waves.

The sailing conditions and manoeuvrability conditions in Kronløbet have been discussed with the users of the harbour and the Danish Maritime Authority and tested in a so-called 'navigation simulator' by Force Technology. One to one, the simulations show what the conditions

will be like for entry and exit through Kronløbet in all kinds of weather and with different kinds of vessels. It is the closest you can get to reality without first building an island.

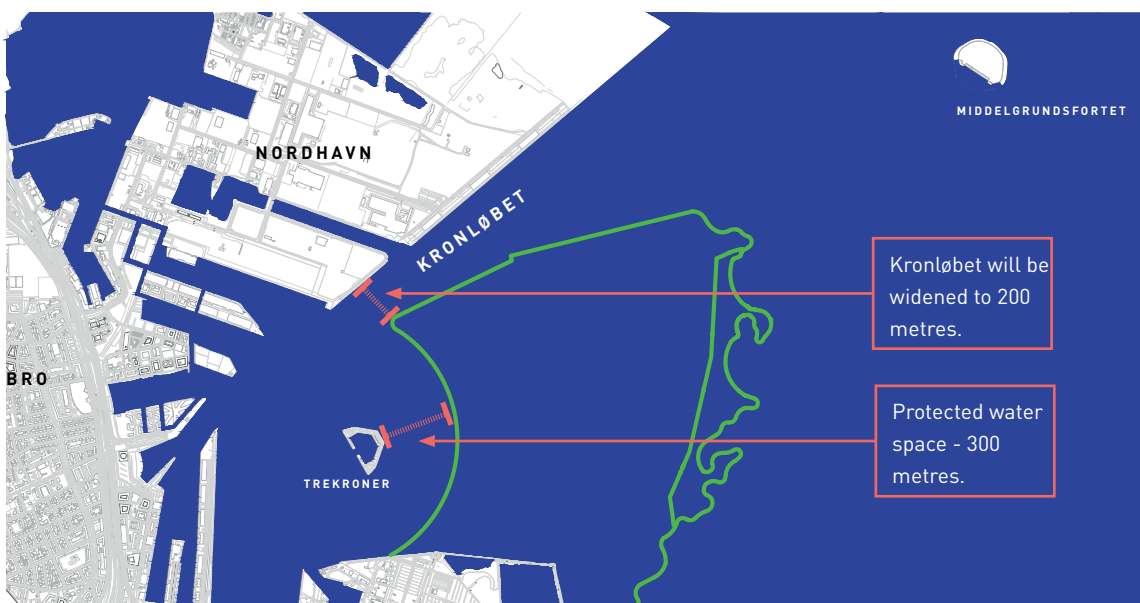
As more users than before will be sharing Kronløbet after the creation of Lynetteholm, in cooperation with the Danish Maritime Authority and

the users of the harbour, CPH City & Port Development will initiate further measures to ensure sailing safety. This is stipulated in the Implementation Report. For example, a signal system will be set up to alert yachting enthusiasts when cruise ships or other large ships are entering Kronløbet, and there will be waiting areas on both sides of Kronløbet.



*The sailing conditions in Kronløbet were tested in a so-called sailing simulator by Force Technology. This is shown in the photo. The sailing simulator shows what*

*the conditions for entry and exit through the Kronløb will be like for both large and small vessels after the creation of Lynetteholm.*



CPH City & Port Development has held, and will continue to hold meetings with users of the harbour and the Danish Maritime Authority to discuss safety in the harbour in the context of constructing Lynetteholm. The next meeting is planned for early 2022.

### **CURRENTS AND WAVES**

Overall, there will be only very limited changes to currents and wave conditions in the harbour entrance as a result of Lynetteholm. This is the assessment of the project's environmental studies.

In Kronløbet, the current will remain unchanged, but for the strong southbound current, the current will be reduced slightly in the outer part (by approximately 0.3 metres per second). Lynetteholm's environmental studies show that, for the strong northbound current, there will be a small increase in the current further inside the harbour as a result of Lynetteholm.

In Kronløbet, which as a result of Lynetteholm will acquire a 'funnel' shape, the waves will become calmer at the outer part, while the height of waves will increase slightly on the inside, at the narrowest point between Nordhavn and Lynetteholm.

### **WATER SPACES AT TREKRONER**

Trekroner will be located between Lynetteholm, Nordhavn and Langelinie.

The distance between Nordhavn and Trekroner will be approximately 300 metres. A protected water space for sailing will be created between Trekroner and Lynetteholm for vulnerable users. The two existing breakwaters at Trekroner will also be removed and the stones recycled for aprons on the dams around Lynetteholm.

### **THE FAIRWAY FOR COMMERCIAL SHIPS WILL BE MOVED**

After Lynetteholm is created, larger commercial ships will sail east of Middelgrunden to Prøvestenen and Kraftværkshalvøen rather than eastwards. Thereby, the waters off the coastal landscape on the east side of Lynetteholm will be reserved for yachting enthusiasts.

### **MARGRETHEHOLM HARBOUR**

The establishment of Lynetteholm will not mean closing Margretheholm Harbour. A road will be created across the entrance to Margretheholm Harbour to be used by lorries transporting soil to Lynetteholm. The road will be created as a dam with a bascule bridge, so ships with masts can sail in and out when the bridge is opened. When the bridge is closed, there will be a passage height of 4.5 metres. The bridge will be open every weekend and on public holidays. On weekdays, the bridge will be open three times during the day, but otherwise closed from 7.00 am to 4.00 pm.