**Updated November 2021** 

# NOISE FROM THE CONSTRUCTION AND OPERATION OF LYNETTEHOLM

#### **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. 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.

### NOISE DURING THE CONSTRUCTION PHASE

Construction of Lynetteholm must comply with the noise limit values that apply in the City of Copenhagen. The construction period will last approximately 3 years,

during which there will be noise from construction machinery etc.

Construction of Lynetteholm will be divided into two phases:

Establishment of the Phase 1 area consists of an access road via Prøvestenen, a bascule bridge at Margretheholm Harbour, a reception facility on Refshaleøen and the first and smaller part of Lynetteholm's perimeter, which consists of dams made of gravel and stone (see map). The expected construction time for Phase 1 is from the end of 2021 to early 2023. Lynetteholm will then be in a position to start receiving soil for the Phase 1 area.

Establishment of Phase 2 consists of the remainder of Lynetteholm's perimeter. To the east and west, dams consisting of stone and gravel will be created, while to the north a sheet pile retaining wall will be constructed in the outer, eastern part of Kronløbet. Expected construction time for Phase 2 is from 2022 to 2025. Lynetteholm will then be in a position to start receiving soil for the Phase 2 area.

The noisiest work will be driving down piles and sheet piles. The construction work will be performed with the quietest equipment. The lowering of piles usually involves quieter vibration. After that, actual driving is possible for the lowest piece, if the ground resistance becomes too great for vibration.



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The City of Copenhagen's current regulations for construction noise stipulate that pile driving must take place on weekdays between 8.00 am and 5.00 pm. The noise level for pile driving can be compared with the noise from other construction sites in Copenhagen: for example, in Nordhavn. The noise limit for other construction work is 70 dB during the day and 40 dB at other times.

By comparison, the current noise limit for construction of the Metro is 73 dB in the daytime and 40 dB in the evening and at night on Havneholmen, where there are homes in the immediate vicinity. Construction of Lynetteholm is thus expected to make less noise than the construction of the Metro - also for a shorter period and much further away from residential areas.

#### **SHEET PILE WORK WILL BEGIN IN 2022**

The perimeter of Lynetteholm will be 7 km long, the majority of which will consist of dams of gravel and rock (aprons). Only a small part of Lynetteholm's perimeter will be constructed as a sheet pile wall (approximately 1,000 metres facing Kronløbet).

Most of the pile driving will be related to the sheet pile wall facing Kronløbet, where the distance to the residential areas on Margretheholm is 2.5 km, and 1.5 km to Sundmolen in Nordhavn. The work will take place over a period of approximately seven months and is expected to start in late 2022.

In addition, for a total of approximately two months, piles and sheet piles will have to be driven for a new access road and for a working guay next to the B&W dry dock (see map), where the nearest residential area is 800 metres away. Likewise, for about one month, piles and sheet piles will have to be driven in the context of constructing a bascule bridge over the entrance to Margretheholm Harbour, where the closest residential area is approximately 500 metres away. This sheet pile work is expected to be completed in 2022.

Before the start of the construction work, in collaboration with the selected contractor, CPH City & Port Development will prepare a noise report, documenting how noise limits will be complied with. It will be sent to the relevant authority. The noise report will stipulate the periods of noisy construction work: i.e. when in the year and for how long.

#### **NOISE FROM RECEIVING SOIL**

When Lynetteholm begins receiving soil (from around 2023), there will be noise from activities at the soil reception site on Refshaleøen and in the landfill area. We expect that it will take around 30 years for Lynetteholm to be filled.

Noise from the work on the site where soil for Lynetteholm will be received will comply with the applicable limit values for the nearest dwellings on Margretheholm and in recreational areas. At the soil reception site, the lorries will arrive with soil, which must be weighed, and excavators and dump trucks will drive around with soil. These activities will cause noise. It should be noted that both the reception area and the area for the activities connected with filling Lynetteholm during the operational phase will move increasingly further away from existing residential areas as Lynetteholm is filled.



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#### **TRAFFIC NOISE**

During the period when Lynetteholm is receiving soil (the operational phase), traffic noise from soil transport will occur on the stretches of road, where there will be an increase in the number of lorries. An extrapolation of traffic volumes up to 2035 and a calculation of the traffic volume associated with transporting soil shows that the impact from the project

may result in around 2 dB on several stretches of road: Prøvestensbroen, Refshalevej at the reception facility, Uplandsgade, Vermlandsgade Vest and Ved Stadsgraven. With the establishment of a new access road, the impact on several roads will be around 1-2 dB, which ranges from just audible to very little change in terms of traffic noise. (See separate fact sheet on soil transport)

