



Operational terms of delivery for the storage and processing of dredged material at depot 'de Slufter'

Operational terms of delivery

The execution of disposal activities at 'de Slufter' is bound by certain terms and conditions. These terms and conditions are derived partly from the permit and for the rest determined by the manager, with a view to optimising the efficient operation of 'de Slufter'. In general, the disposal activities form part of the execution of dredging work, in which several parties are often involved: financier, commissioning party, consultancy or engineering firms and contractors. Each party involved has its own specific responsibility; relevant agreements are set down in a contract and / or specifications.

In order to be able to meet the terms set by the manager of 'de Slufter' on and during the disposal activities, it is advisable to include these in advance in the specifications. Should there be cause to depart from these terms or set additional terms in some other way, prompt consultation with the Port of Rotterdam Authority is an option.

1. Delivery options

For the delivery of dredged material, the following discharge facilities are available at/close to depot 'de Slufter':

1. A discharge site on the premises of 'de Slufter', for delivery by truck;
2. A shore-based connection to the pressure pipeline to 'de Slufter' for a barge unloading dredger, at the Mississippihaven, close to the public landing quay;
3. A landing pontoon with connection to the pressure pipeline to 'de Slufter' for trailing suction hopper dredgers, in the Mississippihaven.

2. Opening hours

For the execution of disposal activities, 'de Slufter' is open as follows:

1. Delivery by truck:

Monday - Thursday	07.00 - 17.30
Friday	07.00 - 17.00
2. Delivery by barge:

Monday - Thursday	07.00 - 17.00
Friday	07.00 - 16.00

The contractor of the barge unloading dredger may discharge the barges at other times. Ask the contractor about this in good time!

3. Delivery by trailing suction hopper dredger:

Daily from 00.00 to 24.00 hrs, 365 days a year.
Delivery during the weekend and on Sundays and public holidays is possible following consultation with the manager;
Announce delivery before Thursday 12.00 hrs.
4. In special cases, it is possible to deviate from the above times, following consultation with the manager.

3. Determining the quantity

Two types of measurement are applicable

1. Delivery by truck:

The difference between the weighing in and weighing out of the truck determines the quantity delivered in tonnes of dredged material. Whether the container or tank is more or less fully loaded, or the dredged material has a low or high density, is irrelevant for calculating the quantity.
2. Delivery by barge or trailing suction hopper dredger:

If delivery is by barge or trailing suction hopper dredger, the **certified hopper content lists and tonnage certificates** for the equipment to be used must be submitted to the manager two weeks prior to the start of the disposal activities.

Measurement of the quantity of dredged material delivered by barge / hopper is carried out by means of the so-called 'half-sphere' method. This is a measuring method whereby only the volume with a density of 1.2 tonnes / m³ or higher is measured.

The measurement is made as follows:

Soundings are taken at a number of points on one or both sides of the cargo hold using the half-sphere; side and number at the discretion of the manager or his representative. The half-sphere has a diameter of 0.17 m. and an underwater weight of 1.5 kg. The average is calculated from these soundings. On the basis of the accompanying hopper content list, the quantity of **'Solid'** cargo to be disposed of is determined using the average calculated from the soundings.

If there is also a significant quantity of **'Liquid'** cargo on top of the solid cargo, to be determined by the manager or his representative, then the quantity of sludge this contains is determined by taking a representative sample. This sample, with a content of 1 litre, is centrifuged for 9 minutes in a centrifuge with a rotation speed of 1500 revolutions per minute, after which a reading is taken of the percentage of sludge that has sunk to the bottom. This percentage is indicative of the quantity of sludge in the liquid cargo.

The **sum** of these particular measurements provides the **total quantity** of dredged material delivered.

If there is still any dredged material in the cargo hold following the discharge process, the **'residual cargo'** is determined. This quantity is deducted from the total quantity of dredged material delivered.

As stated earlier, the quantities are measured in connection with the settlement, between the manager and disposer, of the dredged material disposed of. As such, determining the quantity is completely separate from the way in which the dredging and disposal operations are settled between the disposer and contractor. In addition, the water displacement (in tonnes) is determined for both a full ship and an empty ship with the aid of the tonnage certificate.

If necessary, the manager can demand that the contractor /carrier of the dredged material provide assistance in taking down the measurement data for determining the quantity delivered.

4. Execution of disposal operations

General

1. Two weeks before the start of the disposal activities, the disposer must provide the manager with the following information:
 - Name and address of the contractor.
 - Name, address and telephone number of the contact person for the contractor who is charged with executing the disposal activities.
 - A detailed schedule of the quantity, the way in which and the frequency with which the dredged material will be delivered.
 - Technical specifications of the equipment to be used, such as pump features, etc.
 - Current, certified hopper content lists with delivery by barge or trailing suction hopper dredger.
 - Current, authenticated tonnage certificates with delivery by barge or trailing suction hopper dredger.
2. Arrival of the means of transport at the discharge facility must be announced in good time to the manager or his representative.
3. On arrival at the discharge facilities, an accompanying note must be submitted for every load of dredged material. Dredged material without an accompanying note or with an accompanying note that has been filled in incorrectly or incompletely will be **refused**.
4. The discharge operations will **not** be started until the manager or his representative has given permission for this and the quantity of dredged material delivered has been measured.

5. The dredged material to be discharged must be free from dirt and from substances which will cause surface crusts in 'de Slufter'. Dredged material must be passed through a grid with a maximum mesh width of 20x20 cm when the transport barges or trucks are loaded.
6. In the event of a calamity during the discharge process, the instructions of the manager or his representative must be followed strictly and immediately. Any costs which might ensue from this cannot be reclaimed from the Port of Rotterdam Authority.
7. Departure of the means of transport from the discharge facility must be announced in good time to the manager or his representative and will take place after the (possible) residual cargo of dredged material has been measured.
8. The end of the delivery of a total quantity of dredged material will be reported by fax to the senior officer 'acceptance' within a week of the operations. If the disposer fails to do this, a sum of € 2000,- excl. VAT will be charged to cover extra administration costs.
9. The Port of Rotterdam Authority reserves the right to make use of the dredged material delivered for recycling purposes, should there be cause to do so. The disposer may not derive any rights from this.
10. The disposer will be deemed to have acquainted himself with the situation on site, in and close to 'de Slufter'.
11. Instructions from the manager or his representative and, in the case of transport by water, instructions from the Port of Rotterdam Authority, must be followed strictly by the disposer at all times.

Delivery by truck

12. Every truck must clearly display the number plates of the trailers on the side. In addition, the content of the trailer must be stated. In the case of trucks by means of which more or less separate containers containing dredged material are being delivered, the containers must have a unique number and the content of the container must also be stated.
13. The maximum length of an articulated lorry for weighing is 18 metres. If an articulated lorry is longer than 18 metres, it will be weighed in two parts.

Delivery by hopper / barge

14. If the disposer wishes to make use of the pressure pipeline to 'de Slufter', he must submit a written request to this effect to the manager in good time.
If this request is granted, the contractor is responsible for use of the shore-based connection and/or landing pontoon and for the pumping process in the pipeline. Damage, including possible consequential loss, resulting from catastrophes (impact damage, deposit forming, leakage, etc.) caused by the disposer will be recovered.
15. During the execution of disposal activities, the disposer must take account of the fact that the discharge facilities are also used by trailing suction hopper dredgers which are under contract to the Port of Rotterdam Authority or the Directorate-General for Public Works and Water Management, South Holland Department, in connection with maintenance dredging work in the Rotterdam region. They **always** have precedence when it comes to discharging.
16. The dredged material in the trailing suction hopper dredger or the barges for discharge must be presented in such a way that **no** dredged material is washed overboard at the start or at any time during the discharge process. The dredged material in the trucks must be presented in such a way that there is no spillage outside the discharge area indicated.
17. Throughout the discharge process, the pressure in the transport pipeline that arises when pumping the dredged material may not exceed **8 bar**. Occasionally, as a major exception,

the pressure may be increased to 10 bar, provided that prior written permission has been granted by the manager.

Delivery by barge

18. For the benefit of discharging barges, it is possible to connect a barge unloading dredger to the pressure pipeline to 'de Slufter' via the shore-based connection at the Hartel Canal. The barge unloading dredger does **not** belong to the Port of Rotterdam Authority, however. To use this barge unloading dredger, the disposer is referred to the owner of this equipment.
19. During the execution of the disposal activities, the landing quay facilities can also be used by third parties. The order of arrival at the discharge facility is also the order of discharging, unless the manager decides otherwise due to special circumstances.
20. If the disposer wishes to make use of his own barge unloading dredger, he must request this in writing from the manager in good time.
Permission is only granted after specific agreements have been made with the manager regarding the use of the barge unloading dredger and the possible consequences of such use. These agreements will be set down in writing and, as such, form part of the terms and conditions for the disposal of dredged material at 'de Slufter'.
21. When using the discharge point for a barge unloading dredger, the capacity of the barge unloading dredger must be sufficient for the pumping of sandy dredged material with a flow rate of approx. 5000 m³/ph and a hopper content of approx. 400 m³.
22. Following completion of the transfer, the pipeline must be flushed in such a way that residues remaining in the pipeline do not interfere with the start of following discharges.
23. The barge unloading dredger must be suitable for priming a pipeline filled with dredged material and forcing this through. This dredged material is usually from the previously discharged barge or trailing suction hopper dredger.
24. Throughout the discharge process, the pressure in the transport pipeline that arises when pumping the dredged material may not exceed **8 bar**. Occasionally, as a major exception, the pressure may be increased to 10 bar, provided that prior written permission has been granted by the manager
25. The barge unloading dredger must provide the manager with the VCP data (velocity, concentration and pressure) electronically. If this data cannot be supplied, the VCP data as measured by the manager must be accepted.
26. The barge unloading dredger is obliged, according to the current permit, to make use of recirculation water for process water. In the event of a catastrophe, water can be taken from the surface water outboard if instructed to do so by the manager.
27. The manager is responsible for supplying recirculation water. He endeavours to ensure that the recirculation basins are filled in a morning with approximately 15000 m³ of water. During the day, a maximum 2000 m³ per hour can be pumped to the recirculation basin, in connection with the capacity of the return pump.
28. The maximum level to which the basin may be filled is + 3 metres NAP (Amsterdam Ordnance Datum). The minimum level may not fall below -1 metre NAP.
29. Under normal circumstances, around 6 barges a day can be discharged. However, this number can decline as a result of dirty and sandy dredged material.

Delivery by hopper

30. Data on landing pontoon Mississippihaven and pressure pipeline:
- | | | |
|--|-----------------|--------------------|
| - Diameter connection point | horizontal | 600 mm |
| | vertical | 750 mm |
| - Coupling height above water line (hor) | minimum | 0.50 m |
| | maximum | 6.50 m |
| - Diameter pressure pipe | | 750 mm |
| - Propulsion distance | varying between | 3,200 m and 6,000m |

Drawings of both the horizontal and vertical coupling can be requested from the manager of 'de Slufter'.

31. If the disposer with trailing suction hopper dredgers wishes to make use of the horizontal or the vertical coupling, he must make sure that the trailing suction hopper dredger has been moored securely, at least with a front and rear spring, to ensure that the trailing suction hopper dredger cannot break loose during the discharge process. In addition, care must be taken that no inadmissible forces are exerted on the vertical or horizontal coupling. Trailing suction hopper dredgers must ensure that the pontoon remains in the water on an even keel.

5. Occupational Health & Safety aspects

Occupational Health & Safety plan of work

In the context of personal protection and working conditions, it must be assumed that exposure to all dredged material and process water released during the disposal activities can be harmful to health. In order to safeguard the safety and health of the environment and of the persons who are involved professionally with the processing of contaminated dredged material as effectively as possible, an **Occupational Health & Safety plan of work**, linked to a **safety contingency plan**, has been put in place. The manager has a copy of the plan of work that is freely available for perusal by all parties involved. Everyone is expected to have familiarised themselves with its contents.

All of the prescribed measures and provisions, which are necessary to protect health and safety, must be executed to the letter. In order to exclude the development of unsafe situations during the disposal activities as much as possible, it is everyone's duty to report the threat of a catastrophe immediately to the manager, foreman and /or safety expert. Spotting potentially unsafe situations can result in modification of the measures to be taken.

Everyone must comply consistently with:

- the generally applicable rules of conduct;
- the instructions given;
- the agreed procedures.

Failure to follow these rules, instructions and procedures will result in employees or visitors being removed from or refused entry to the workplace.

The working site at and close to 'de Slufter' is sub-divided into three zones, indicated by signs in the so-called 'traffic light colours', i.e.:

- The 'Clean zone' green
- The 'Cleaning zone' amber
- The 'Contaminated zone' red

The '**Clean zone**' is the area in which no contaminants can be found, or in which the contaminated dredged material is only treated in such a way that it poses no danger to staff and visitors.

The '**Cleaning zone**' is located between the contaminated zone and the clean zone and is where any necessary cleansing of equipment takes place.

Central postal address / street address:

The Port of Rotterdam Authority

Nautical Service Center
Dept. MI / H&V
Oude Maasweg 2
3197 KJ Rotterdam-Botlek
Port number 4030

Slufter Depot
Slufter Management Office
Noordeboulevard 501
3199 LC Rotterdam-Maasvlakte
Port number 9092 - Unloading point for trucks Port number 9093

7. Concluding remarks

The Port of Rotterdam Authority (incl. manager) may, in special cases and for reasons of its own, depart from that stated in these Operational terms of delivery.

The Port of Rotterdam Authority was extremely meticulous in drawing up these Operational terms of delivery. Any modifications which might be made to the permit conditions, admittance criteria, procedures, etc. will be published as consistently and quickly as possible, including via an updated issue of these Operational terms of delivery. However, this does not mean that the Port of Rotterdam Authority can, at all times, vouch for the correctness and presentation of the most recent terms and conditions, criteria, procedures, etc.

The Port of Rotterdam Authority refuses to accept any responsibility in this matter in advance. Should there be any doubt regarding the application of the correct regulations, you are advised to contact the persons referred to under point 6.

Appendix 1: Rules of conduct for drivers

- Report to the porter's lodge to register.
- Wear personal protective equipment.
When not in your vehicle (and also in the vicinity of the vehicle), you are obliged to wear:
 - Protective clothing that covers all parts of the body
 - Safety shoes
 - Eye protection when unloading trucks. Make sure that there is eye-rinsing liquid in the cabin.
 - Watertight gloves during possible contact with contaminated sludge.
- Exposure to dust, mist and aerosol formation must be avoided and limited as much as possible. Remain upwind or inside. Use breathing protection if this is not possible.
- It is forbidden to smoke, eat and drink within the contaminated zone. When eating or going to the toilet, remove PPE and wash hands well.
- When working at height use safety devices.
- Never go behind the vehicle during unloading. Always use the vehicle's handbrake.
- Clear up spilt cargo. The tipping mechanism must be fully lowered and the doors of the cargo space must be closed before driving away.
- Always leave the site with a clean truck. If necessary, leave via the car wash.
- Drive at maximum 30 kph. On the site, the traffic regulations apply.
- Use or possession of alcohol or drugs is forbidden.
- Ensure that there is a First Aid kit in the truck.
- Report unsafe situations and accidents to the manager.
- Follow the manager's instructions. If you fail to comply with the applicable rules, you could be removed from the site.
- We reserve the right to inspect your vehicle on leaving the site.