

PORT OF HELSINKI LTD

VUOSAARI HARBOUR WASTE MANAGEMENT PLAN

18th DECEMBER 2015 (updated 5th July 2019)



|| PORT OF || || HELSINKI ||

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PORT OF HELSINKI

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1 Introduction

In accordance with chapter 9 section 3 of the Finnish Environmental Protection Act for Seafaring (*Merenkulun ympäristönsuojelulaki* 1672/2009) the port operator must prepare a waste management plan in order to manage the waste that is generated on board ships, i.e. ship-generated waste. The arrangement of ports' waste management is also guided by regulations regarding the operations of ports and general environmental protection and waste management.

A port operator must ensure that the port has the equipment or procedures necessary to receive waste from the ships using the harbour, waste which is to be taken care of by the port operator, as set out in the Environmental Protection Act for Seafaring. These kinds of waste are

- Oily waste (MARPOL Annex I)
- Waste containing harmful liquid substances (MARPOL Annex II)
- Sewage (MARPOL Annex IV)
- Solid waste and cargo waste (MARPOL Annex V)
- Exhaust gas waste, which it is forbidden to discharge into the environment (MARPOL Annex VI)

The duties set out in the harbour's waste management plan, such as the reception, collection, storage, handling and utilisation of waste, must, in the plan, take into account the size and nature of the harbour, and the vessel types using the harbour. The plan must also state that it is necessary that the measures required to implement the waste management are followed, any shortcomings observed are rectified immediately, and that waste management measures are constantly being developed.

The harbour's waste management plan is approved by the Centre for Economic Development, Transport and the Environment (ELY Centre) of the area where the harbour's operations take place. Port of Helsinki (now the Port of Helsinki Ltd) submitted, in accordance with the Environmental Protection Act for Seafaring (1672/2009), the Vuosaari Harbour Waste Management Plan on 1st March 2012, for approval by the Uusimaa ELY Centre, and entry into the environmental protection information system. The Uusimaa ELY Centre approved the Waste Management Plan with a letter dated 23rd November 2012, Entry No UUDELY/120/07.00/2010. In the future the harbour's waste management plan will be reviewed if the quality, amount or waste management of the waste deposited at the harbour changes significantly. If no need to review the waste management plan arises within three years of its approval, the port operator must submit a notification to the relevant supervisory authority, stating that the waste management plan is still valid.

Due to the decision on the review of the permit decrees of the environmental permit of the Vuosaari Harbour, given on 10th November 2014 to the Port of Helsinki by the Regional State Administrative Agency for Southern Finland (No 224/2014/1), the change of the Port of Helsinki into a limited company on 1st January 2015 and the personnel changes, the Vuosaari Harbour Waste Management Plan drawn up in 2012 had to be revised in 2015. This waste management plan replaces the Vuosaari Harbour Waste Management Plan approved in 2016.

In accordance with chapter 9, section 5 of the Environmental Protection Act for Seafaring, the waste management plan draft was available for consultation and comment on the website of the Port of Helsinki (<u>www.portofhelsinki.fi</u>) for the period of 10th - 24th April 2019. After this the Port of Helsinki submitted the waste management plan to the Uusimaa ELY Centre for approval and entry into the environmental protection information system. The Uusimaa ELY Centre approved the waste management plan with a letter dated 2nd August 2019 (Entry No UUDELY/5269/2015).



This waste management plan covers the waste management at Vuosaari Harbour of both ship-generated waste and other waste generated by harbour operations that the Port of Helsinki is responsible for. This waste management plan does not cover the waste management for vessels to which the Finnish Transport Safety Agency Traficom has granted an exemption from the mandatory delivery of waste and notification obligation.

Nor does this waste management plan cover situations where the shipping company itself, on the basis of an exemption from Traficom, takes care of its waste management with reception equipment located within the closed harbour area managed by the Port of Helsinki, and with a direct waste management agreement with a waste management company.

Vessels operating as regular liner traffic to Vuosaari Harbour have been granted an exemption from the mandatory delivery of waste by Traficom, as a result of which around 75% of calls at Vuosaari Harbour were covered by Traficom exemptions in 2018. At Vuosaari the Port of Helsinki is responsible for waste management primarily from sources other regular liner traffic waste management, and thus only a fairly small proportion of all vessel calls. With regard to ship-generated waste water, it is noted that the vessels that have received exemptions from Traficom may also dispose of ship-generated waste water into the Port of Helsinki's sewer network, and onwards into Helsinki Region Environmental Services Authority's (HSY) sewer network for no separate charge.

2 The legislative basis of the waste management plan

Organisation of harbours' waste management is guided by the following acts and decrees:

Waste management on a general level

- The Waste Act (646/2011)
- The Government Decree on Waste (179/2012)
- The Environmental Protection Act (527/2014)
- The Environmental Protection Decree (713/2014)

Waste management for vessels and harbours

- The Environmental Protection Act for Seafaring (1672/2009)
- The Government Decree on Environmental Protection for Seafaring (76/2010)

International catering waste

- Regulation (EC) No 1069/2009
- Commission Regulation (EU) No 142/2011
- National animal by-product law 517/2015

Waste management in the Helsinki Metropolitan Area is also guided by HSY's waste management regulations (Common waste management regulations for the Helsinki Metropolitan Area and Kirkkonummi, HSY March 2019, in Finnish).

The primary principle of the legislation is reducing the harmfulness and amount of waste generated. However, if waste is generated, it must in the first instance be prepared for reuse, or in the second instance for recycling. If recycling is not possible, the waste must be utilised in another way, including utilisation as energy. If utilisation is not possible, the waste must be disposed of.

The principle of ship-generated waste management is delivery of the waste ashore for further processing. The vessel is obliged to provide a notification, before arrival in the harbour, of intention to deposit ship-generated waste and cargo waste, and this waste must be deposited before leaving the harbour. A fee will be charged for ship-generated waste regardless of whether the ship disposes of waste at the harbour of not. The Finnish



Transport Safety Agency Traficom may, however, grant an exemption from the mandatory delivery of waste, if the ship is engaging in regular service and it has an agreement with a competent waste management company or the harbour.

According to legislation, the port authority must draw up a waste management plan for the organisation of waste management for waste originating from ships. The structure and content of the harbour's waste management plan are defined in the Government Decree on Environmental Protection for Seafaring (76/2010). The waste management plan must be reviewed as required – however at least every three years – and the draft version must be available for consultation at the port authority's office for at least 14 days during the harbour's operating hours.

3 Vuosaari Harbour environmental permit

The Regional State Administrative Agency of Southern Finland gave on 10th November 2014 to the Port of Helsinki the decision No 224/2014/1 regarding the review of the Vuosaari Harbour's environmental permit, given on 26th March 2002 in accordance with the Environmental Permit Procedure Act (735/1991) by the Environment Committee of the City of Helsinki (§ 128 Ymk 38/521-99), decrees. The decision was appealed to the Vaasa Administrative court, but the appeal did not concern the permit decrees given regarding waste management at Vuosaari Harbour. In connection with the incorporation of the Port of Helsinki, Vuosaari Harbour's environmental permit transferred from the City of Helsinki to the management of the Port of Helsinki Ltd from 1st January 2015.

In the case regarding the review of the Vuosaari Harbour's environmental permit decision decrees the Vaasa Administrative Court gave on 3rd February 2016 the decision No 16/0018/2, and the Vuosaari Harbour's environmental permit became legally valid after the appeal period. The environmental permit concerns the closed harbour area and its operators. Adherence to the environmental permit is monitored as part of the Uusimaa ELY Centre's environment and natural resources area of responsibility.

4 Port operator, persons in charge and contact details

Port operator

| partment |
|--|
| PO Box 197 |
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| |



Persons in charge for waste management

Ship-generated waste

| Traffic Manager | Tero Valu |
|------------------|------------------------------------|
| Telephone: | +358 (0)500 606 907 |
| E-mail address: | <u>tero.valu@portofhelsinki.fi</u> |
| Terminal Manager | Petri Jäntti |

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 E-mail address:
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Contact details for the reception of vessel waste service at the Port of Helsinki: E-mail address: <u>supervisor.vuosaari@portofhelsinki.fi</u>

Other waste

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Person in charge for environmental matters

| Head of Sustainable D | Development Andreas Slotte |
|-----------------------|----------------------------------|
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5 General description of Vuosaari Harbour

Vuosaari Harbour is located in eastern Helsinki, around 15 kilometres from the centre of the city, close to the border with the municipality of Sipoo. Harbour operations in Vuosaari began in November 2008. Vuosaari Harbour serves LoLo, RoRo and Ropax ships transporting unitised parcelled goods, as well as passenger traffic on Ropax vessels. There is currently no passenger car ferry or international cruise ship traffic at Vuosaari Harbour. There is a road connection from the Harbour to Ring III and rail access to the country's main rail lines. For the Vuosaari Harbour general plan map, see appendix 1.

The Port of Helsinki is responsible for the basic infrastructure in the Vuosaari Harbour area, on the basis of the so-called landlord-tradition, meaning that the Port of Helsinki manages and develops the harbour area. The services provided by the Port of Helsinki are the maintenance of the harbour area, supplying clean water to ships and receiving ship-generated waste and waste water.

The majority of the traffic at Vuosaari Harbour is scheduled, regular liner traffic. The traffic is primarily headed to the harbours of the Baltic and the northern parts of Central Europe. Vuosaari Harbour operates according to the fast through-flow harbour principle, in which unitised goods flows move quickly into and away from the area. Due to the nature of the harbour operations and the regular ship traffic, the amount of waste generated at the harbour and for which the Port of Helsinki is responsible is quite small.



In 2018 2,100 ships called at Vuosaari Harbour, of which around 59% were RoRo ships and around 36% container ships (table 1). In 2018 - 7,927,190 tonnes of goods traffic was transported through Vuosaari Harbour, and 186,620 passengers travelled through the harbour.

| Vuosaari | | |
|-------------------|---------------|----------|
| Vessel type | Calls, number | Calls, % |
| Ro-ro ships | 1246 | 59,33 |
| Container ships | 756 | 36,00 |
| Dry cargo vessels | 81 | 3,86 |
| Tankers | 3 | 0,14 |
| Other vessels | 10 | 0,48 |
| Tug boats | 3 | 0,14 |
| Barges | 1 | 0,05 |
| Total | 2100 | 100,00 |

| Table 1. | Ship calls at Vuosaari Harbour in 2018. |
|----------|---|
|----------|---|

The goods traffic travelling through Vuosaari Harbour is primarily rubber-wheeled traffic, i.e. goods are transported primarily in trailers, trucks and lorries. The proportion of goods traffic transported by rail on the harbour railway is on the rise, because of the Metsä Fibre's pulp transportation. The pulp cargo moves in containers or as break bulk.

The harbour operators currently operating at Vuosaari Harbour are Finnsteve Oy Ab, Steveco Oy and Multi-Link Terminals Ltd Oy. The harbour operators take care of ships' loading and unloading operations. In addition to these, customs responsible for checking passengers and cargo, the Finnish border guard, and different companies serving goods traffic, which are tenants of the Port of Helsinki, operate at the harbour. In practice there are no passenger terminal services in Vuosaari's closed harbour area.

6 Vuosaari Harbour waste management plan

6.1 General information

The Vuosaari Harbour Waste Management Plan covers both ship-generated waste and other waste generated by harbour operations. The majority of the ship-generated waste for which the Port of Helsinki is responsible originates from occasional, irregular traffic. Other waste – in practice usually so-called property waste – is primarily generated by the closed harbour area's break and control room facilities, and repairs or other construction or similar activities.

Vuosaari Harbour's waste management is based on the size and nature of the harbour, and the kind of ships that use the harbour. The waste management plan takes into account the local waste management regulations and the related procedures (Common waste management regulations for the Helsinki Metropolitan Area and Kirkkonummi, HSY March 2019, in Finnish). The harbour's current waste management arrangements are realised in connection with the companies operating in Vuosaari Harbour, taking into account the companies' needs. The harbour's waste management procedures are included in an operating system that is certified according to standards ISO 9001 and ISO 14001, on the basis of which operations are monitored and developed continually. In addition to internal and external audits, the starting point for the development of operations is the feedback received from customers and tenants and the development suggestions received from



different sources. The planning of waste management at Vuosaari Harbour is the responsibility of the Port of Helsinki Ltd Vuosaari Harbour Department.

6.2 Management of ship-generated waste

6.2.1 Waste handling instructions

The Port of Helsinki's instructions regarding ship-generated waste are set out on the Port of Helsinki's website (<u>https://www.portofhelsinki.fi/en/cargo-traffic-and-ships/instructions/waste-handling-instructions</u>). This page includes the ship-generated waste notification form, the inadequacy of waste reception facilities form and the IMO's Guide CONSOLIDATED GUIDANCE FOR PORT RECEPTION FACILITY PROVIDERS AND USERS (MEPC.1/Circ.834/Rev.1 1 March 2018). The waste handling instructions and the above-mentioned notification forms are appended to this document as Appendices 2-4.

6.2.2 Procedure

Waste management companies, selected by Port of Helsinki by means of competitive bidding, are responsible for the handling of ship-generated waste. The Port of Helsinki acts as a link between the waste management company and the vessel's representative. The vessel's representative manages the issues relating to the vessel's waste and files the necessary waste notification to the port concerning the vessel's need to hand over waste. Regarding management of ship-generated waste at Vuosaari Harbour, the Port of Helsinki's contact person is the Traffic manager (if necessary, also the Terminal manager), In practise ships waste management is organized by Port of Helsinki's subsidiary South Finland Port Service Ltd (SFPS) which orders waste management services for ships. For those vessels that do not have an exemption from the Finnish Transport Agency Traficom, the procedure for ship-generated waste is as follows:

- 1. The vessel notifies the representative of its need to leave waste at port.
- 2. The vessel's representative notifies the port of the vessel's need for waste service no later than 24 hours before arrival at port.
- 3. Port of Helsinki orders suitable waste transportation vehicles with sufficient capacity from the waste management company.
- 4. The waste management company ensures that the waste transportation vehicles arrive at the port at the appointed time and receive the waste.
- 5. The waste is transferred directly from the vessel to the waste transportation vehicle by the vessel's personnel or by the waste management company. Then the waste is transferred for further processing or to an incineration site.
- 6. The waste management company sends reports to Port of Helsinki regarding the type and the amount of waste that the vessel delivered. The Port of Helsinki sends the vessel, through the representative, a receipt for reception of the waste, when it has received a report from the waste management company on the waste volumes.

6.2.3 Payment system

The waste management fee for vessels covers the reception, handling and disposal of solid and recyclable waste and oily waste from engine rooms. The fees are listed in Port of Helsinki's price list, which is confirmed annually by the company's board, and which can be found on the Port of Helsinki's website (<u>https://www.portofhelsinki.fi/en/port-helsinki/price-list</u>).

The fee for solid mixed waste, recyclable waste, and oily waste from engine rooms is independent of the amount of waste delivered. Instead, it depends on the net tonnage of the



vessel. For an exceptionally large amount of waste in terms of normal traffic or the vessel's normal operation, the vessel or shipping company will be charged according to incurred costs. There is no separate charge for discharging conventional domestic waste water into the port's sewer system. If the waste water pumped from a ship is classified as industrial, the charge will be determined separately.

Receipt and handling of other waste discharged from the vessel at the harbour (e.g. waste generated by sulfur oxide scrubbers) will be charged for on the basis of costs generated.

A waste management fee is not charged if the Finnish Transport Safety Agency Traficom has exempted the vessel from the obligatory disposal of oily and solid waste. If an exempted vessel discharges waste at the port, the Port of Helsinki is entitled to deliver the waste for treatment or disposal at the expense of the vessel or the shipping company. There is no separate charge for discharging conventional domestic waste water into the port's sewer system for vessels with exemptions from Traficom or their shipping companies.

In 2016 the Port of Helsinki will begin using a ship-generated waste payment system, whereby vessels carrying mainly passengers are granted a 20% discount on the waste management fee if they discharge their domestic sewage into the port's sewer network. In practice, this discount will not, with the current situation, affect ships using Vuosaari Harbour.

6.3 Management of other waste

The Port of Helsinki agrees on the collection of property waste with the waste management company selected through competitive bidding at that time. Vuosaari Harbour operators have their own direct contracts with waste management companies for the collection of property waste. The amount of property waste generated by the Port of Helsinki's operations within the closed harbour area is usually very low, as the area only contains break and control room facilities, with the most significant being the Customs premises. The amount, type, location, or emptying frequency of the waste containers may be adjusted if necessary. The Port of Helsinki does not (with the exception of ship-generated waste) preprocess or utilise waste. The contracted waste management company is responsible for the transportation, preprocessing, disposal and reporting of the waste. The waste management company is also responsible for the equipment used in handling vessel waste and its maintenance.

6.4 Waste types and recycling

6.4.1 Ship-generated waste

Waste management companies, selected by Port of Helsinki by means of competitive bidding, are responsible for the handling of oily and solid ship-generated waste. These waste types are primarily transferred directly from vessels into waste transportation vehicles, therefore fixed waste reception equipment is not needed in the harbour. The sewage received by the Port of Helsinki is directed into HSY's sewer network, through the waste water preprocessing facility (V13) located in the Vuosaari Harbour area, where it is pre-aerated and neutralised.

A ship-generated waste point is located in the harbour area, maintained by Finnlines Oyj and based on Traficom's exemption, however this is not included in this waste management plan. The Finnlines waste point is located in the eastern part of Vuosaari Harbour (C quay), under the dual ramps. The waste point is used primarily by Finnlines' RoRo ships, as waste collection trucks usually empty catering, glass, metal and mixed waste directly from Finnlines' Ropax ships.



Oily waste from engine rooms

Oily waste, waste oil and sludge produced from the separation of heavy fuel oil are byproducts of vessel maintenance. Other oily waste, such as oily rags and filters, is also generated in small amounts.

Port of Helsinki arranges the reception of oily waste for vessels that use the port's waste management service. In such cases, the waste management company transfers the oily waste directly from the vessel into a truck, and delivers the waste to a facility for the treatment of this kind of waste.

Solid ship-generated waste

Solid ship-generated waste refers to food and household waste generated during typical operation of a vessel from the activities of the crew, personnel and passengers. This kind of waste includes mixed waste, separately sorted paper and cardboard, glass, metal and biowaste. Waste generated on board a vessel is transferred directly into trucks that pick up the waste through the vessel's service doors. Plastics are transferred with mixed waste to the energy production plant in Vantaa.

Ship waste water

Ship waste water can be divided into black water, or sewage, and grey water. Black water contains human waste and comes primarily from toilets, whereas grey water refers to the leftover water from e.g. washing, sauna and kitchen facilities.

According to the Harbour Regulations of the Port of Helsinki, discharging any waste water into the sea is forbidden in the harbour area. International regulations state that processed sewage may be discharged at a distance of more than three nautical miles (around 5.5 km) from the nearest land – provided that the vessel is equipped with machinery to comminute and disinfect the sewage. Unprocessed sewage may only be discharged at a distance over 12 nautical miles (around 22 km) from the nearest land. Considering the unprocessed black waters IMO has banned discharging them into the Baltic sea. This regulation is in effect, for new passenger ships, after 1st of June 2019, and for old passenger ships from 1st of June 2021.

Pumping waste water directly into the port's sewer network is possible at all berths at Vuosaari Harbour. This network is connected to the preprocessing unit (V13) located in the harbour, and onwards into the HSY sewer network, from where the waste water is then led to HSY's waste water treatment plant in Viikinmäki. Both passenger ships in regular liner traffic as well as a number of ships that use the harbour occasionally pump their waste water into the harbour's sewer network.

Hazardous waste

Hazardous waste is waste which is flammable or explosive, infectious, or hazardous to health or the environment. Typical hazardous waste from ships includes different kinds of oily waste, greases, solvents, accumulators, batteries and fluorescent tubes. Hazardous waste is emptied into a truck operated by the waste management company. The vessel's personnel are responsible for transferring the waste into the truck.

International catering waste

A vessel is considered to be in international traffic if it stops at a port outside of the EU along its route. Food waste generated on board such a vessel during the consumption and preparation of food is referred to as international catering waste. All other waste that has been in contact with food or leftovers (wrapping papers, disposable tableware etc.) is also considered international catering waste.



International catering waste can spread diseases in animals and humans. For this reason, international catering waste, according to legislation, must be disposed of by burial in an authorized landfill or by incineration at an approved incineration plant. If catering waste is to be left at the port, the vessel must make a notification to the Port of Helsinki in advance and provide an estimate of the amount of food waste to be delivered. The Port of Helsinki will then book a suitable truck from the waste management company, to transport the waste to the Vantaa Waste-to-Energy plant to be burned. The waste transport company is responsible for the appropriate disinfection of the waste truck after the waste transport. The disinfection does not happen at the port area. ICW is also transported to the Vantaa waste-to-energy plant during the maintenance of the plant because it is not allowed to tranship international catering waste.

<u>Other</u>

The Port of Helsinki is prepared to receive exhaust gas waste, for which a suitable truck may be ordered from a waste management company. In normal situations, the traffic that currently uses Vuosaari Harbour does not generate glass waste. When required, a collection vehicle to collect glass waste can be ordered through the waste management company.

6.4.2 Other waste

In the contracts it makes, the Port of Helsinki requires that the enterprises operating in the Vuosaari harbour area take proper care of managing their waste. The Port of Helsinki agrees on the collection of property waste for which it is responsible with the waste management company selected through competitive bidding at that time. Property waste is collected in waste bins, the amount, capacity, location, and emptying intervals of which are adjusted when necessary the amount, location etc. of the property waste reception equipment is adjusted when necessary. The contracted waste management company is responsible for the transportation, pre-processing, disposal and reporting of the waste. Port of Helsinki is also responsible for the normal household waste management of Custom's premises. Custom's premises are located outside the closed harbour area, in the vicinity of gate A in two different buildings (V6, V7). The waste management of the premises located in the Port of Helsinki Gate House and Hansa Terminal are the responsibility of the tenant Sponda Oyj.

Mixed waste

Mixed waste generated at Vuosaari Harbour is comparable to regular household waste of which the recyclable portions have been sorted out. Mixed waste is currently transferred to Vantaa Waste-to-Energy Plant to be used as a source of energy.

Paper and cardboard

In Vuosaari's closed harbour area, office paper, printed products and cardboard are not collected separately as the volumes of these waste types are usually very low. Within Customs these types are sorted and collected normally. Dirty paper and cardboard can also now be utilised at the Vantaa Waste-to-Energy plant as a source of energy.

Biowaste

In Vuosaari's closed harbour area biowaste is not collected separately as the volumes are usually very low. Within Customs these types are sorted and collected normally.

<u>Metal</u>

In Vuosaari's closed harbour area metal is not collected separately as the volumes are usually very low. Within Customs these types are sorted and collected normally.

<u>Glass</u>



Glass is not collected separately in Vuosaari's closed harbour area or within Customs, as the separate collection of this waste type is not currently worthwhile.

Plastic

Plastic is not collected separately, it is used to energy production among mixed waste.

Hazardous waste

In normal conditions very little hazardous waste is generated at Vuosaari Harbour. If necessary, larger quantities of normal electronic scrap, batteries, fluorescent tubes, floodlight bulbs, waste oil from ramp hydraulics etc. is collected by the waste collection company used by the Port of Helsinki.

Oil sump emptying

At Vuosaari Harbour there are oil sumps at Arctic Container Oy's container washing site (VL13), Steveco Oy's vehicle fuelling site (VL27), VR Group's railway engine fuelling site (VL28) and Container Depot Ltd Oy's container washing site (VL30). Oil sumps are inspected and emptied if necessary annually. The functioning of the shut-off valves at the leaking cargo unit handling site (VL10), managed by the Port of Helsinki, is also inspected at least twice a year.

Sandy waste

The sand sumps of the surface water sewers (1,235 in total) are inspected and if necessary emptied of the accumulated sediment at least every other year. The sand sumps are emptied by a drain cleaning company used by the Port of Helsinki. The spreading of gritting sand in the winter and collection of the sand and other solid matter – including those originating from piled up snow – in the spring is outsourced to the City of Helsinki's construction service Stara.

<u>Other</u>

Other waste types, such as wood or metal, may be separated and collected at Vuosaari Harbour if such waste is generated during repair or construction work, for example. Most often Port of Helsinki requires that the contractor of the work site takes care of the demolition and construction waste themselves.

6.5 Reporting procedures and waste types and amounts in 2018

The waste management contractors who have contracts with the Port of Helsinki report the waste types and amounts collected from the vessels which Port of Helsinki is responsible for and which it empties from the harbour area reception equipment, to the Port of Helsinki. The Port of Helsinki reports this waste information annually in connection with the reporting required by the environmental permit. The waste information is also submitted to the official environmental YLVA service. In addition to the reporting required by the environmental permit, the Port of Helsinki has reported information regarding certain waste batches to the City of Helsinki Environment Centre and the Finnish Port Association.

The ship-generated and other waste types and amounts received in 2018 at Vuosaari Harbour are presented in Appendix 5. In total, 640.7 tonnes of ship-generated waste was received, of which the majority (around 95%) was oily water. Property waste from other harbour operations totalled around 85.6 tonnes, of which around 68% was burnable mixed waste.

In Vuosaari Harbour in 2018 total of 18,690 m³ of waste water was received from vessels.



6.6 Development of waste management

The Port of Helsinki's Vuosaari Harbour Department works actively to develop the waste management of ship-generated and other waste types, through advice, provision of information, reporting waste quantities, and by agreement. The Port of Helsinki has provided guidance for waste management companies with a service description in connection with the competitive tendering. The overall functionality of the waste management is evaluated annually, and any needs for development are discussed with the waste management companies.

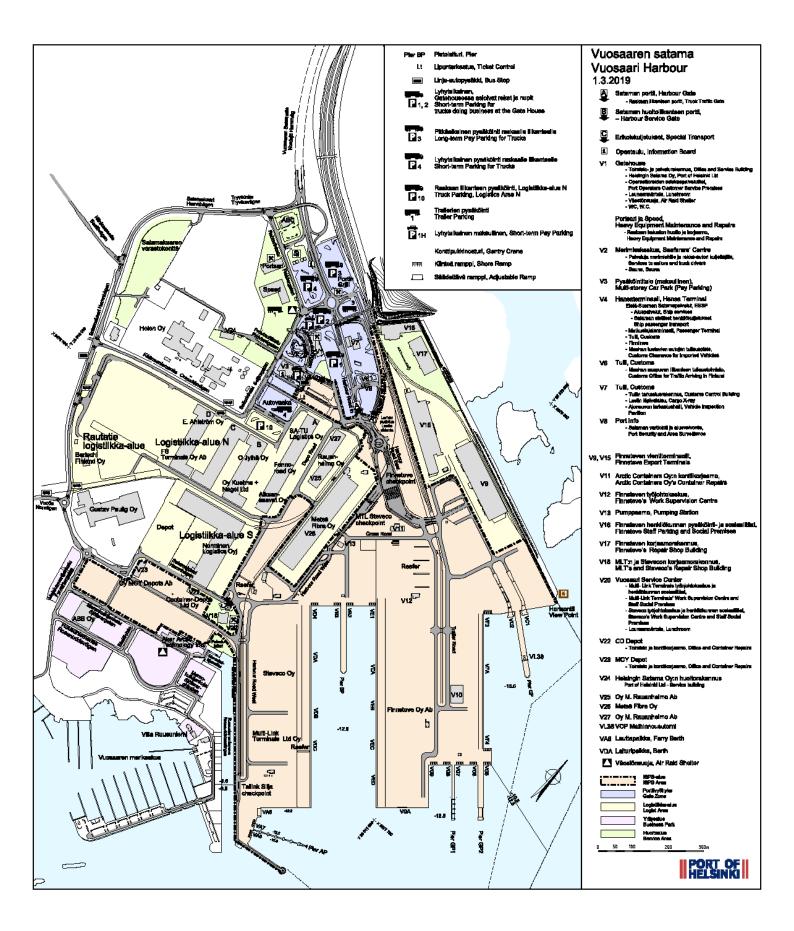
The Port of Helsinki is aiming to focus its waste management development on the following areas:

- 1. Preventing the generation of waste
 - maintaining and updating the Port of Helsinki's guidelines
 - web page
 - instructions distributed to tenants
 - instructions distributed to the Port's own staff
 - advice and education targeted at increasing waste generation prevention
 - monitoring and providing information about changes that have occurred in legislation

- 2. Increasing the efficiency of sorting
 - increasing sorting opportunities as required
 - attempting to reduce the proportion of waste that mixed waste accounts for
 - paying attention to the instructions for and correct use of waste points
- 3. Minimising waste management costs
 - attempting to reduce the proportion of waste that mixed waste accounts for
 - attempting to optimise emptying times
 - regarding waste bins, moving where possible to front-loading containers, the contents of which are weighed
- 4. Developing and maintaining the waste management network
 - reviewing the functionality of the waste management plan through internal and external audits
 - developing the organisation of waste management within the organisation
 - monitoring and advising the harbour's operators

Port of Helsinki attemps to promote utilisation of so-called new waste types and actively exploring with waste management companies and other parties the most rational ways to receive and handle waste.

|| PORT OF || || HELSINKI ||





Appendix 2

13(22)

Waste Handling Instructions

Oily waste from engine room, black/grey water and solid waste are included in the waste management fee.

Notification

The ship sends a duly completed ship-generated waste notification to the Port of Helsinki no later than 24 hours before the arrival to addresses: Passenger Harbours: shipservice(at)portofhelsinki.fi Vuosaari Harbour: supervisor.vuosaari(at)portofhelsinki.fi

- If the vessel needs waste reception service on Sunday or Monday, the notification must be sent by 3 pm on the previous Friday.
- If the vessel needs waste reception service on Public Holiday(s) or on the day after that, the notification must be sent by 3 pm on the day before the Public Holiday(s).

Based on the waste notification, the Port of Helsinki will arrange the waste management company to collect the waste.

The ship-generated waste notification form (PDF, 726 KB)

Inadequancy of waste reception facilities form (PDF, 796 KB)

Guide to good practice for port reception facility providers and users (PDF, 431 KB)

Vessel with exemption certificate

If a vessel has an exemption from mandatory delivery of ship-generated waste and from notification of such waste the vessel shall follow the regulation adhere. Exemption certificate has to be applied from maritime authorities.

- Port of Helsinki has to be informed if the vessel has such a certificate.
- contact details of waste service provider shall be found in each waste container if the shipping company has its own waste container at the dock area.
- hazardous waste (bilge oil, solid oily waste, batteries, paint, solvents) has to be stored in container, which is tight, covered, locked and marked. All liquid hazardous waste must be stored in container with raised boundary or with collecting reservoir.
- area has to be kept clean at all times.
- all waste containers has to kept clean at all times

Oily waste from engine room (20 m³ is included in the waste management fee)

Oily waste is discharged from the vessel into a tank lorry. The pumping rate must be a minimum 5 m3/h and the maximum one time volume cannot exceed 40 m3. The vessel must separate bilge water before delivery. Maximum water content is 70 %. Waiting time may not exceed 30 minutes.

Safety instructions for discharging:

- hoses must be in good condition and of sufficient length
- all couplings and tightness of couplings must be checked
- effective communication is established between the vessel and tank lorry
- discharging rate must be agreed on

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- emergency procedures agreed on between the vessel and tank lorry
- the driver of tank lorry must remain near the lorry at all times
- absorbent material on site
- no smoking or naked lights on site during the operation at the area
 If the spillage occurs the following actions are to be taken:
- cease discharging immediately
- take measures to stop or limit spillage
- notify Helsinki VTS (VHF 71 or tel: +358 (0)20 4485385)
- provide incident report to harbour master

Black/grey water (included in the waste management fee)

Grey and black water is discharged from the vessel directly to the city sewage system. The port's ship service personnel connects the hose at the appointed time. The vessel must use its own pump for discharging and the vessel must have possibilities to flush the hoses after the discharging. Recommended flushing method is pure water. The capacity of sewage system is approximately 80-100m3/hour.

Waste water reception service can be ordered by sending a duly completed shipgenerated waste notification to the Port of Helsinki at <u>shipservice@portofhelsinki.fi</u> not later than 24 hours before arrival at port. If the ship needs waste water reception service on a Sunday or a Monday, the notification must be sent by 3 pm on the previous Friday. If the vessel needs waste reception service on Public Holiday(s) or on the day after that, the notification must be sent by 3 pm on the day before the Public Holiday(s).

Safety instructions for discharging:

Before discharging:

- type of the discharging waste water must be agreed on
- discharging volume is to be agreed on
- maximum discharging rate is to be agreed on
- hose flushing method must be agreed on
- all hoses and connections must be checked
- safety and emergency instructions must be agreed on
- readings must be checked
- back flow valve must be tested

After discharging:

- readings must be checked
- hose and lines must be flushed

Solid waste

Solid waste means a household waste and other similar waste generated during the regular ship operation.

Mixed waste (20 m³ included in the waste management fee)



Dimensions (length, width, height) of a wate package may not exceed 1.2 m. Packages should be equipped with labels declaring the content.

The vessel empties its waste into the waste-removal lorry or mixed-waste container on the quay, if there is a small amount of the waste. Waiting time may not exceed 30 minutes.

Sorted waste (20 m³ included in the waste management fee)

Dimensions (length, width, height) of a wate package may not exceed 1.2 m. Packages should be equipped with labels declaring the content.

If sorting has been performed for solid waste, the port must be informed when waste notification is made. Sorted-waste is picked up at the vessel's shell gate at an appointed time.

Sorting instructions

Metal

- tins
- aluminium tins and foil
- metal lids
- crown and screw caps
- soft drink tins

No paint tins, aerosols, batteries or other hazardous waste, cables or tubes

Glass

- empty bottles
- empty jars

No crystal, porcelain, ceramics, window or mirror glass, light bulbs, bottle caps or jarlids.

Cardboard

No paper, wet or dirty cardboard, foliated packs, expanded polystyrene or plastic.

Wooden pallets

No broken pallets.

International catering waste ($7 \text{ m}^3/5$ tonnes is included in the waste management fee)

The EC regulation 1774/2002 classifies any catering waste from means of transport operating internationally as a hazardous waste (class 1), due to the risk of disease and requires special handling. In this context, international traffic refers to all vessels which call on their route in countries outside the EU. "International catering waste" means food waste onboard and any waste, such as wrapping waste and packaging material which has been in contact with food and food waste. Such waste must be sorted separately onboard. If this catering waste is mixed with other waste, all waste must be handled as class 1 international catering waste according to the regulation. All ships calling outside of EU during the voyage and wanting to deliver international catering waste to the port of Helsinki must make a notification no later than 24 hours before the arrival (notification exceptions for Sundays, Mondays and Public Holidays are presented in the beginning of these Instructions).



Dimensions (length, width, height) of a waste package may not exceed 1.2 m. Packages should be equipped with labels declaring the content.

The Port of Helsinki will make arrangements for receiving and handling such waste according to the official requirements. Reasonable amount of international catering waste (originating after previous port call) is included in the waste management charge. Waiting time may not exceed 30 minutes.

Other waste categories to be received (Additional charge)

Hazardous waste

Hazardous waste includes batteries, fluorescent tubes, paints, solvents, photographic material, dry cleaning chemicals, medicines and x-ray materials. To deliver hazardous waste to the port of Helsinki, the ship must give a notification of the type and quantity of hazardous waste no later than 24 hours before arrival (notification exceptions for Sundays, Mondays and Public Holidays are presented in the beginning of these Instructions). The Port of Helsinki passes the ship's order to the waste management company and bills the vessel according to actual costs incurred.

Scrap metal

Scrap metal includes metal pipes and cables, wire ropes, taps, fittings, pullers, nails, metal container, furniture hardware, machinery and equipment made of metal. To deliver scrap metal waste to the port of Helsinki, the ship must give a notification of the type and quantity of scrap metal waste no later than 24 hours before the arrival(notification exceptions for Sundays, Mondays and Public Holidays are presented in the beginning of these Instructions). The Port of Helsinki passes the ships order to the waste management company and bills the vessel according to actual costs incurred.

Electrical and electronic waste

Electrical and electronic waste includes discarded information and communication equipment, household appliances, consumer electronics, lighting fixtures, electrical and electronic tools, monitoring and control equipment, vending and slot machines. To deliver electrical and electronic waste to the port of Helsinki, the ship must give a notification of the type and quantity of electrical and electronic waste no later than 24 hours before arrival (notification exceptions for Sundays, Mondays and Public Holidays are presented in the beginning of these Instructions). The Port of Helsinki passes the ships order to the waste management company and bills the vessel according to actual costs incurred.

Exhaust gas-cleaning system residues

To deliver exhaust gas-cleaning residues to the port of Helsinki, the ship must give a notification of the type and quantity of waste no later than 24 hours before arrival (notification exceptions for Sundays, Mondays and Public Holidays are presented in the beginning of these Instructions). The Port of Helsinki passes the ships order to the waste management company and bills the vessel according to actual costs incurred.



Appendix 3

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APPENDIX 2

STANDARD FORMAT OF THE ADVANCE NOTIFICATION FORM FOR WASTE DELIVERY TO PORT RECEPTION FACILITIES

DELIVERY FROM SHIPS (ANF)

1. SHIP PARTICULARS

| 1.1 Name of ship: | | | 1.5 Owner or operator: | | |
|--------------------|--|--|------------------------------------|---|----------------------------------|
| 1,2 IMO number: | | | 1.6 Distinctive number or letters: | | |
| 1.3 Gross tonnage: | | | 1.7 Flag State: | | |
| 1.4 Type of ship: | Oil tanker Other cargo ship | | nical tanker enger ship | Bulk carrier Ro-ro | □ Container □ Other (specify) |

2. PORT AND VOYAGE PARTICULARS

| 2.1 Location/Terminal name and POC: | 2.6 Last Port where wastes/residues were delivered: |
|---------------------------------------|--|
| 2.2 Arrival Date and Time: | 2.7 Date of Last Delivery: |
| 2.3 Departure Date and Time: | 2.8 Next Port of Delivery (if known): |
| 2.4 Last Port and Country: | 2.9 Person submitting this form is (if other than the master): |
| 2.5 Next Port and Country (if known): | |

3. TYPE AND AMOUNT OF WASTES/RESIDUES FOR DISCHARGE TO FACILITY

| MARPOL Annex I – Oil | Quantity (m ³) |
|-------------------------------------|--|
| Oily bilge water | |
| Oily residues (sludge) | |
| Oily tank washings | |
| Dirty ballast water | |
| Scale and sludge from tank cleaning | |
| Other (please specify) | |
| MARPOL Annex II - NLS | Quantity (m ³) /Name ¹ |
| Category X substance | |
| Category Y substance | |
| Category Z substance | |
| OS – other substances | |
| MARPOL Annex IV – Sewage | Quantity (m ³) |

| A. Plastics B. Food wastes | |
|---|---------------|
| | |
| O Demostie weeks | |
| C. Domestic wastes | |
| D. Cooking oil | |
| E. Incinerator ashes | |
| F. Operational wastes | |
| G. Animal carcasses | |
| H. Fishing gear | |
| I. E-waste | |
| J. Cargo residues (non-HME) ² | |
| K. Cargo residues (HME) ² | |
| MARPOL Annex VI – Air pollution | Quantity (m³) |
| Ozone-depleting substances and equipment containing such substances | |
| Exhaust gas-cleaning residues | |

¹ Indicate the proper shipping name of the NLS involved.

² Indicate the proper shipping name of the dry cargo.



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|--|--------|------|----|
|--|--------|------|----|

| Name of ship: | | IMO Nur | nber: | |
|---|--|--|--|--|
| Please state below the approximate am all wastes/residues on board at this po complete all columns. | ount of wastes/residue ort please strike throug | s remaining on board h this table and tick | and the percentage of maxin the box below. If delivering s | num storage capacity. If delivering ome or no waste/residue, please |
| I confirm that I am delivering all the was | stes/residues held on t | | shown on page 1) at this por | |
| Туре | Maximum dedicated storage capacity (m ³) | Amount of wastes/residues retained on board (m ³) | Port at which remaining wastes/residues will be delivered (if known) | Estimate amount of wastes/residues to be generated between notification and next port of call (m ³) |
| MARPOL Annex I – Oil | | | | |
| Oily bilge water | | | | |
| Oily residues (sludge) | | | | |
| Oily tank washings | | | | |
| Dirty ballast water | | | | |
| Scale and sludge from tank cleaning | | | | |
| Other (please specify) | | | | |
| MARPOL Annex II – NLS ³ | | | | |
| Category X substance | | | | |
| Category Y substance | | | | |
| Category Z substance | | | | |
| OS - other substances | | | | |
| MARPOL Annex IV - Sewage | | | | |
| Sewage | | | | |
| MARPOL Annex V – Garbage | | | • | |
| A. Plastics | | | | |
| B. Food wastes | | | | |
| C. Domestic wastes | | | | |
| D. Cooking oll | | | | |
| E. Incinerator ashes | | | | |
| F. Operational wastes | | | | |
| G. Animal carcasses | | | | |
| H. Fishing gear | | | | |
| I. E-waste | | | | |
| J. Cargo residues (non-HME) ⁴ | | | | |
| K. Cargo residues (HME)4 | | | | |
| MARPOL Annex VI – Air pollution | | | | |
| Ozone-depleting substances and equipment containing such substances | | | | |
| Exhaust gas-cleaning residues | | | | |
| Date: | Nr | ame and Position: | | |

Signature:

³ Indicate the proper shipping name of the NLS involved.

⁴ Indicate the proper shipping name of the dry cargo.

Time:

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Appendix 4

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APPENDIX 1

FORMAT FOR REPORTING ALLEGED INADEQUACIES OF PORT RECEPTION FACILITIES¹

The master of a ship having encountered difficulties in discharging waste to reception facilities should forward the information below, together with any supporting documentation, to the Administration of the flag State and, if possible, to the competent Authorities in the port State. The flag State shall notify IMO and the port State of the occurrence. The port State should consider the report and respond appropriately informing IMO and the reporting flag State of the outcome of its investigation.

| 1 | SHIP'S PARTICULARS | | |
|-----|-------------------------------|-------------------|-----------------|
| 1.1 | Name of ship: | | |
| 1.2 | Owner or operator: | | |
| 1.3 | Distinctive number or lette | ers: | |
| 1.4 | IMO Number ² : | | |
| 1.5 | Gross tonnage: | | |
| 1.6 | Port of registry: | | |
| 1.7 | Flag State ³ : | | |
| 1.8 | Type of ship: | | |
| | Oil tanker | Chemical tanker | Bulk carrier |
| | Other cargo ship | Passenger ship | Other (specify) |
| 2 | PORT PARTICULARS | | |
| 2.1 | Country: | | |
| 2.2 | Name of port or area: | | |
| 2.3 | Location/terminal name: | | |
| | (e.g. berth/terminal/jetty) | | |
| 2.4 | Name of company operat | - | |
| | the reception facility (if ap | plicable): | |
| 2.5 | Type of port operation: | | |
| | Unloading port | Loading port | Shipyard |
| | Other (specify) | | |
| 2.6 | Date of arrival: | // (dd/mm/yyyy) | |
| 2.7 | Date of occurrence: | _/_/ (dd/mm/yyyy) | |
| 2.8 | Date of departure: | // (dd/mm/yyyy) | |

¹ This format was approved by MEPC 53.

² In accordance with the IMO ship identification number scheme, adopted by the Organization by Assembly resolution A.1117(30).

³ The name of the State whose flag the ship is entitled to fly.



3 INADEQUACY OF FACILITIES

3.1 Type and amount of wastes/residues for which the port reception facility was inadequate and nature of problems encountered

| Type of wastes/residues | Amount for discharge (m ³) | Amount not accepted (m ³) | Problems encountered Indicate the problems encountered by using one or more of the following code letters, as appropriate. A No facility available B Undue delay C Use of facility technically not possible D Inconvenient location E Ships had to shift berth involving delay/cost F Unreasonable charges for use of facilities G Other (please specify in paragraph 3.2) |
|--|---|--|--|
| MARPOL Annex I - related | | | |
| Oily bilge water | | | |
| Oily residues (sludge) | | | |
| Oily tank washings (slops) | | | |
| Dirty ballast water | | | |
| Scale and sludge from tank cleaning | | | |
| Other (please specify) | | | |
| MARPOL Annex II – related Category of NLS ⁴ residue/water mixture for discharge to facility from tank washings: | | | |
| Category X substance | | | |
| Category Y substance | | | |
| Category Z substance | | | |
| MARPOL Annex IV – related | 1 | 1 | |
| Sewage | | | |
| MARPOL Annex V – related | | | |
| A. Plastics | | | |
| B. Food wastes | | | |
| C. Domestic wastes | | | |
| D. Cooking oil | | | |
| E. Incinerator ashes | | | |
| F. Operational wastes | | | |
| G. Animal carcasses | | | |
| H. Fishing gear | | | |
| I. E-waste | | | |
| J. Cargo residues (non-HME) ⁵ | | | |
| K. Cargo residues (HME) ⁵ | | | |
| MARPOL Annex VI – related | | | |
| Ozone-depleting substances and equipment | | | |
| containing such substances | | | |
| Exhaust gas-cleaning residues | | | |

⁴ Indicate, in paragraph 3.2, the proper shipping name of the NLS involved and whether the substance is designated as "solidifying" or "high viscosity" as per MARPOL Annex II, regulation 1, paragraphs 15.1 and 17.1 respectively.

⁵ Indicate the proper shipping name of the dry cargo.



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| □ Yes | cuss these proble | ems or report them to the port reception facility? |
|---------------|--------------------|---|
| If Yes, with | whom (please sp | ecify) |
| lf Yes, what | was the respons | se of the port reception facility to your concerns? |
| | | n (in accordance with relevant port requirement aception facilities? |
| □ Yes | □ No | □ Not applicable |
| lf Yes, did y | ou receive confirm | mation on the availability of reception facilities or |
| □ Yes | D No | |
| ADDITION | AL REMARKS/CO | OMMENTS |
| | | |
| | | |



Appendix 5

| Waste type | Waste class nr | Amount (tn) | Reciever of waste | Waste type nr | R&D code |
|---------------------------------|-------------------|----------------|-------------------|------------------|----------|
| Burnable mixed waste | 200301 | 32,92 | Remeo | 1 | D10 |
| International catering waste | 200108 | 0,04 | Remeo | 1 | D10 |
| Grease | 200125 | 0,08 | Remeo | 1 | R3 |
| Solid oily waste | 150202 | 0,47 | Remeo | 3 | D10 |
| Paint and varnish waste | 80111 | 1,01 | Remeo | 3 | D10 |
| Solid burnable waste | 200135 | 0,35 | Remeo | 3 | D10 |
| Oily waters | 130402 | 605,8 | Fortum | 3 | R09 |
| Total | | 640,7 | | | |

Types and amounts of ship-generated waste received at Vuosaari Harbour in 2018

Types and amounts of other waste received at Vuosaari Harbour in 2018:

| Waste type | Waste class nr | Amount (tn) | Reciever of waste | Waste type nr | R&D code |
|-----------------------|-------------------|----------------|-------------------|------------------|----------|
| Burnable mixed waste | 200301 | 58,02 | Remeo | 1 | D10 |
| Mixed waste, landfill | 200301 | 22,66 | Remeo | 1 | D01 |
| Paper | 200101 | 4,46 | Remeo | 1 | R12B |
| Cardboard | 150101 | 0,48 | Remeo | 1 | R12B |
| Total | | 85,6 | | | |