

ORKNEY ISLANDS COUNCIL



**The Orkney Harbours [Liquefied Gases]
Byelaws**

1978

ORKNEY ISLANDS COUNCIL

THE ORKNEY HARBOURS (LIQUEFIED GASES) BYELAWS 1978

SUMMARY OF CONTENTS

	BYELAW
Citation and commencement.	1
Application.	2
Interpretation.	3
Liquefied gas vessels	4
Notice before entry.	5
Red flag and light.	6
Craft alongside	7
Fog, mist, etc. during navigation.	8
Berthing of vessels.	9
(1) Place	
(2) Moorings	
(3) Towing wires	
Communications.	10
Leakage.	11
Vessels to lie afloat and mobile.	12
Warning notices.	13
Safety precautions.	14
Lighting.	15
Supervision.	16
Compartments to be kept closed	17
Gas freeing and tank cleaning.	18
Cooking equipment.	19
Boiler fires.	20
Fire prevention generally.	21
Specific fire precautions.	22
Conditions of liquefied gas	23

BYELAW

Loading and discharging.	24
(1) Application of byelaw	
(2) Approved berths	
(3) Adjacent berths	
(4) Notice of operations	
(5) Ships' stores	
(6) Method of loading and discharging	
Protective clothing.	25
Unauthorised persons.	26
Naked lights.	27
Smoking and matches.	28
Work liable to cause sparks or ignition.	29
Portable electrical equipment.	30
Pipelines	31
Flexible pipes.	32
Leakage from pipelines.	33
Pipelines to be earthed.	34
Safety relief valves.	35
Shut-off devices.	36
Gauges.	37
Refrigerated gas.	38
Spillage.	39
Inspection	40
Completion of operation.	41
Responsibility for compliance with byelaw.	42

SCHEDULE 1

Harbour jurisdiction of the Council.

SCHEDULE 2

Flag 'B' of the International Code of Signals.

Orkney Islands Council

THE ORKNEY HARBOURS (LIQUEFIED GASES) BYELAWS 1978

The Orkney Islands Council, in exercise of the powers conferred by section 47 of the Orkney County Council Act 1974 and of all other powers thereunto enabling them hereby make the following byelaws:

1. Citation and commencement

These byelaws may be cited as the Orkney Harbours (Liquefied Gases) Byelaws 1978 and shall come into operation on the 1st June, 1979.

2. Application

These byelaws shall apply in respect of the loading and discharging of LG within the jurisdiction of the Orkney Islands Council in its capacity as a harbour authority, the limits of which jurisdiction are specified in Schedule 1 to the byelaws.

3. interpretation

(1) In these byelaws, except where the context otherwise requires "the Council" means the Orkney Islands Council;

"harbour area" means any area within the limits of jurisdiction of the Council referred to in byelaw 2;

"harbourcraft" means a vessel normally employed on local work within a harbour area;

"harbourmaster" means the harbourmaster or other officer duly appointed by the Council to act in such capacity, or any person having authority so to act;

"installation owner" means the owner of an LG storage installation, and includes its manager;

"LG" means a gas having vapour pressure exceeding 275 kPa (2.8 kp/cm) absolute at a temperature of 37.8°C and certain other substances as shown in Chapter XIX of the IMCO Code for the Construct on and Equipment of Ships carrying Liquefied Gases in Bulk, maintained in liquid form by compression or refrigeration or a combination of compression and refrigeration;

"LGV" means a vessel having on board or being about to take on board a cargo the whole or part of which consists of LG, or . a vessel which, having discharged such gas, has not been certified by the harbourmaster as having its hold and tank wholly free from LG and from any flammable vapour;

"master" means the person (other than a pilot) for the time being in charge of an LGV;

"owner" means, so far as applicable, the owner or master of an LGV or the owner of any LG.

(2) The Interpretation Act 1889 shall apply for the interpretation of these byelaws as it applies for the interpretation of an Act of Parliament.

4. Liquefied gas vessels

(1) No LG shall be carried in any vessel other than one constructed and adequately maintained for the purpose;

(2) No LG shall be carried in any harbourcraft except under and in accordance with a licence issued under this byelaw by the Council in respect of that craft.

5. Notice before entry

At least 24 hours before the entry of an LGV into a harbour area, the master thereof shall give written notice to the harbourmaster of the nature and quantity of LG in the vessel, the name and port of registration of the vessel, the approximate time of arrival at the harbour area, the quantity it is intended to load or discharge there, and any special or unusual circumstances capable of affecting safety.

6. Red flag and light

(1) Save as provided in paragraph (3) below, the master of every vessel which had LG on board or which, having discharged such gas, has not been rendered free from gas vapour to the satisfaction of the harbour master, shall ensure that the vessel shall display

(a) between sunrise and sunset, Flag "B" of the International Code of Signals, as shown for ships in Schedule 2 to these byelaws; and

(b) between sunset and sunrise and otherwise in conditions of poor visibility, when moored or anchored but not otherwise a red light so constructed to give a clear, uniform and unbroken light visible in conditions of normal visibility all round the horizon for a distance of at least 2 nautical miles.

(2) Every such flag and light shall be displayed in such a position as may best ensure its visibility, and the light shall be displayed above any other light which the vessel may show.

(3) The master of every harbourcraft which cannot comply with the foregoing provisions of this byelaw, and which had LG on board or which, having discharged such gas, has not been rendered free of gas vapour to the satisfaction of the harbourmaster, shall ensure that the craft displays

(a) between sunrise and sunset, in a conspicuous position above the deck, Flag "B" of the International Code of Signals made of metal and of the dimensions shown for harbourcraft in Schedule 2 to these byelaws; and

(b) between sunset and sunrise, and otherwise in conditions of poor visibility, when moored or anchored but not otherwise, an all round red light.

7. Craft alongside

No craft shall come alongside an LGV without the permission of the harbour master .

8. Fog, mist, etc. during navigation

If an LGV is overtaken by fog, mist, falling snow, heavy rainstorm or other conditions affecting visibility whilst being navigated, the master shall, as soon as is practicable, anchor or moor in the most convenient position clear of the navigable fairway, but shall, unless the harbourmaster otherwise directs, proceed with the voyage when the condition has ceased and the vessel can be safely navigated.

9. Berthing of vessels

Subject to byelaw 8 above, the following provisions shall have effect:(1) *Place.*

The master of an LGV shall on entry into a harbour area apply to the harbourmaster for a decision as to where the LGV is to be anchored or moored, and shall not move it therefrom except by his permission or order.

(2) *Moorings.* An LGV shall be secured at all times with moorings of sufficient strength and number having regard to the size of the vessel and to local conditions, and such moorings shall be kept under surveillance at all times, particularly when another vessel is passing and shall be adjusted as required for the rise and fall of the tide and the loading and discharging of cargo, and kept capable of quick release in case of emergency.

(3) *Towing wires.* The master of an LGV whilst it is at berth shall provide adequate towing wires at the bow and stern to enable the vessel to be moved by tug in case of emergency, with the towing eyes maintained at or about water level.

10. Communications

(1) The installation owner and the master shall establish and effectively maintain direct telephonic or radio communication between any berth used for the discharging of LG and the installation from or to which LG is being transferred to or from the berth, and any earphone, microphone or other apparatus used shall be of a type designed not to cause the ignition of flammable vapour.

(2) The installation owner and the master shall ensure that a responsible officer is in attendance at the loading or discharging point at all times whilst an LGV is loading or discharging and that adequate means of communicating with him are in operation.

11. Leakage

The master and the installation owner, so far as their respective areas of operational responsibility permit, shall ensure that all jetty drain-holes

and drain-pipes, vessel's scuppers and drain-pipes, and all other drains of any kind whereby LG can in case of accident escape into a harbour area are closed before loading or discharging commences and are kept closed during the whole period of loading or discharging, and that all cargo pipelines and associated equipment are kept constantly under supervision during loading and discharging.

12. Vessels to lie afloat and mobile

An LGV shall at all times lie afloat, and shall not be immobilised without the written consent of the harbourmaster.

13 . Warning notices

Throughout the period when an LGV is engaged in loading or discharging a notice giving warning of danger shall be exhibited by the installation owner at each entrance or approach to the berth at which the loading or discharging takes place, and no person shall carry out such loading or discharging unless such notices are being exhibited.

14. Safety precautions

(1) A safety check list showing the main safety precautions to be taken before loading or discharging LG and the procedures to be taken in case of emergency shall be signed by the master and the installation owner before such operations begin.

(2) If during an operation of loading or discharging LG anything happens which could affect the safety of the operation, it shall be suspended as soon as it is safe to do so, and shall not be resumed until adequate safety measures have been taken.

15. Lighting

LG shall not be loaded or discharged from an LGV between sunset and sunrise unless adequate lighting arrangements are provided to the satisfaction of the harbourmaster.

16. Supervision

The master shall ensure that at all times a responsible officer is on watch and an adequate crew on board to give effect to these byelaws and to deal with emergencies.

17. Compartments to be kept closed

All compartments in which tanks for containing LG are permanently fitted in an LGV shall be kept securely closed during the whole time the vessel is within a harbour area.

18. Gas freeing and tank cleaning

(1) No gas freeing or tank cleaning on an LGV shall be carried out without the permission of the harbourmaster.

(2) Before the operation of gas or tank cleaning is discontinued the master shall ensure that the tank is purged of air prior to loading, and that inert gas is kept readily available at all times to assist with purging.

19. Cooking equipment

No person shall, except with permission of the harbourmaster, use on an LGV, or at any berth where LG is being stored or handled, any type of cooking equipment other than fixed equipment heated by steam or by immersed electric elements.

20. Boiler fires

(1) The master shall ensure that boiler fires necessary for the mobility and safety of the vessel and for the handling of cargo and ballast are kept under supervision, and shall cause them to be extinguished if the harbourmaster so directs.

(2) The master shall not allow funnel uptakes or boiler tubes to be blown except with the permission of the harbourmaster.

21. Fire prevention generally

(1) The master of an LGV and the installation owner shall ensure that all due precautions are taken for the prevention of fire or explosion.

(2) The master shall ensure that all fire fighting appliances on board an LGV are kept ready for immediate use.

(3) The installation owner shall ensure that the master and his crew are made aware of fire fighting arrangements available on shore.

22. Specific fire precautions

During the loading or discharge of LG on or from an LGV:

(1) The master shall ensure

(a) that an adequate number of deck fire hoses are uncoiled and connected to the fire main, and that the fire pump is kept ready for immediate operation;

(b) that pressure on the vessel's main is maintained by a pump on board;

(c) that ventilators are either trimmed to prevent gas entering enclosed spaces or, if such trimming is not effective, covered or closed;

(d) that all mechanical ventilation or air-conditioning units serving enclosed spaces other than the cargo machinery spaces are shut down if there is a risk of gas being drawn in;

(e) that precautions are taken to prevent gas entering accommodation and main propulsion and attendant auxiliary machinery spaces, and that when access into or from such spaces is necessary doors are opened only momentarily;

- (f) that except as provided in sub-paragraph (e) above all external doors, ports and similar openings are kept closed.
- (2) The installation owner shall ensure
 - (a) that all fire fighting appliances which are required to be on any berth used for the loading or discharging of LG are kept ready for immediate use;
 - (b) that portable water sprays or means to create a water curtain are provided at the jetty.

23. *Condition of liquefied gas*

(1) Neither the master of an LGV nor the installation owner shall permit the loading or discharging of LG unless adequate precautions are taken to ensure that no dangerous reaction is liable to occur by reason of chemical instability.

- (2) For the purposes of this byelaw the precautions taken shall include
- (a) where appropriate, the addition of an inhibitor to the LG, its refrigeration or other equally effective measures;
 - (b) where an inhibitor is used, the provision to the master of the vessel of a responsibly authenticated certificate stating the name and amount of inhibitor added, the date when it was added, the expected duration of its effectiveness and any temperature limitations affecting it.

24. *Loading and discharging*

(1) *Application of byelaw.* This byelaw shall apply in respect of every LGV while engaged in the loading or discharging of LG or ballast water, gasfreeing or tank cleaning.

(2) *Approved berths.* No loading or discharging of LG shall be carried out except at a berth duly approved by the Council for the purpose.

(3) *Adjacent berths.* The master of an LGV shall not permit the loading or discharging of LG on or from his vessel whilst flammable liquids or other dangerous goods are being loaded or discharged at an adjacent berth, unless he has obtained clearance from the harbourmaster that it is safe to do so.

(4) *Notice of operations.* Before any loading or discharging of LG or any gas-freeing or tank cleaning is carried out, the master shall give adequate notice to the harbourmaster of the time and place of such loading, discharging, gas-freeing or tank cleaning and the installation owner shall ensure that adequate warning notices are placed at all entrances or approaches to the berth at which LG is to be loaded or discharged.

(5) *Ships' stores.* During the loading or discharging of LG into or from the tank of the vessel, and during any gas-freeing or tank cleaning, ships' stores shall not be worked otherwise than by hand or bunkering carried out unless and to the extent that the harbourmaster authorises it.

(6) Method of loading and discharging.

An LGV shall not be loaded or discharged except by means of

(a) steam from the vessel's boilers or power generated on board by electrical plant or internal combustion engines designed and adequately maintained for the purpose.

(b) steam or electric power supplied from the shore and connected by equipment which, in the case of electrical equipment, complies with the following requirements

- (i) The switching arrangements for the connection of the shore supply to the ship's equipment shall be such as to prevent inadvertent connection to any circuit which might give rise to danger;
- (ii) all electrical equipment shall be so constructed and installed as to avoid danger of injury to any person handling it in a proper manner;
- (iii) conductors shall be adequately electrically insulated and protected against physical damage and chafing;
- (iv) each separate circuit shall be protected against short circuit;
- (v) each overload protective device shall be permanently marked with its rated current carrying capacity;
- (vi) no cable shall be suspended in an overhead position where it may be liable to damage from vehicles, cranes or other mobile equipment;
- (vii) an earth conductor of appropriate size shall be provided for connection to the earth terminal of the vessel or the vessel's hull.

25. Protective clothing

- (1) The installation owner and the master shall ensure that during any loading or discharging of LG which may be harmful by inhalation of vapour or contact with the skin all persons under their respective control engaged in and in the vicinity of the operation wear protective clothing and equipment sufficient to ensure protection against such risk.
- (2) Where the loading or discharging of LG involves handling equipment which is at a low temperature, the installation owner and the master shall ensure that all persons under their respective control involved in handling or operating such equipment wear protective clothing sufficient to prevent accidental frostbite.
- (3) The installation owner shall ensure that not less than two self-contained breathing sets are provided at each berth before any loading or discharging of LG is carried out, and that they are placed in an accessible and clearly marked position.
- (4) No person on board an LGV, nor any shore operator at an LG berth, shall wear any type of footwear liable to cause a spark.

26. Unauthorised persons

No person shall approach any berth at which LG is being loaded or discharged, or an LGV loading or discharging it, unless he has been authorised to do so by the harbourmaster or the installation owner.

27. Naked lights

Except with the permission of the harbourmaster, no person shall use, carry or place any naked light in an LGV or at any berth at which such vessel is lying.

28. Smoking and matches

(1) Except at times and in places approved by the harbour master or the master no person who is on board an LGV shall:

- (a) smoke; or
- (b) carry matches or any other thing designed to produce ignition.

(2) The master and the installation owner shall each take adequate steps to prevent any person under his control from carrying matches or any other thing whatsoever designed to produce ignition at or near any place where LG is being loaded or discharged.

(3) Subject to paragraph (1) above, no person who is on or near a berth where LG is being loaded or discharged shall:

- (a) smoke; or
- (b) carry matches or any other thing designed to produce ignition,

29. Work liable to cause sparks or ignition

(1) Where there is a possibility of LG being in the vicinity:~

(a) tools may be employed only on operations required for the loading or discharging of the gas, or in an emergency;

(b) care shall be exercised to avoid causing a spark when using tools; and

(c) no hammering or chipping or other work capable of causing ignition shall be carried out.

(2) No work involving the use of hot rivets, welding, burning, power tools or any tools or implements liable to cause a spark shall be carried out on an LGV except with the permission of the harbourmaster, and in accordance with any conditions imposed by him:

Provided that this paragraph shall not apply in respect of repairs requiring the use of power tools or implements liable to cause a spark so long as such repairs are confined strictly to the engine room and are not begun until after the engine room has been adequately ventilated.

30. Portable electrical equipment

(1) No person shall use portable electrical equipment or lamps on wandering electric leads in any cargo space, hold space, pump or compressor room, cofferdam, bunker or ballast compartment or anywhere over the cargo tanks of an LGV.

(2) Paragraph (1) above shall not apply to the proper use of signal and navigation lights or any portable artificial lighting and battery fed or accumulator operated hand-lamps of a pattern tested and found suitable for use in a flammable atmosphere.

31. Pipelines

(1) No person engaged in LG operations shall use pipelines and apparatus which are not appropriate to the physical and chemical characteristics of the product for which they are to be used, or use equipment for any substance other than that for which it is suitable having regard to the temperature, pressure and compatibility of the product.

(2) No person shall cause vapour to be discharged to the atmosphere
except

- (a) by the operation of a safety valve for the release of an accidental increase of pressure;
- (b) by the venting of inert gases from a vessel's tank.

(2) Any pipeline liable to damage by impact from vehicular traffic shall be suitably protected.

32. Flexible pipes

(1) in this byelaw "specified maximum pressure" means the maximum service pressure as indicated by the makers of the pipe by the appropriate markings thereon.

(2) No flexible pipe shall be employed for loading or discharging LG unless its specified maximum pressure is at least 1050 kPa, nor unless the owner is in possession of, and keeps available for inspection by the harbourmaster on demand, a responsibly authenticated certificate showing that a prototype thereof has been successfully subjected to a pressure test of 5 times the specified maximum service pressure under service pressure conditions.

(3) Before being put into service for the first time, and subsequently at such intervals as the harbourmaster may require, each length of flexible pipe shall be hydrostatically tested at ambient temperature to a pressure of not less than 1 1/2 times the specified maximum service pressure nor more than two fifths of its bursting pressure.

(4) Before being put into use on any day, a flexible pipe shall be inspected for visible signs of deterioration, and no person shall use a flexible pipe if such signs are visible.

(5) A flexible pipe shall be adequately protected against damage from blows by the provision of grommets throughout its length, or by other effective means.

(6) The metal connections of all flexible pipes shall be so protected to prevent the connections being damaged or causing a spark as a result of accidental contact with some other object, and shall be provided with grommets so as to avoid contact with the berths.

33. *Leakage from pipelines*

The master and the installation owner shall take all practicable means for the detection and prevention of leakage from pipelines and other appliances.

34. *Pipelines to be earthed*

The installation owner shall ensure, in respect of each pipeline used for loading or unloading LG

- (a) that the pipeline is electrically continuous and includes an insulating flange or short section of non-conductive hose;
- (b) that the pipeline on the seaward side of the insulating section is electrically connected to the LGV, and on the landward side to the jetty earthing system;
- (c) that adequate precautions are taken to prevent any short-circuit of the insulating section;
- (d) that the earthing and unulating systems are inspected at such intervals as shall ensure their effectiveness; and
- (e) that other metallic connections between the berth and the LGV are so protected or arranged as to avoid the possibility of incendive sparking.

35. *Safety relief valves*

The installation owner and the master, so far as their respective areas of operational responsibility permit, shall ensure that there is incorporated in every cargo pipeline one or more safety relief valves of adequate capacity so loaded as to prevent pressure in the pipeline from rising above the limit which the pipeline can safely contain, and that provision is made for every safety relief valve to discharge to a safe place.

36. *Shut-off devices*

(1) Before any operation of loading and unloading LG is begun the master and the installation owner shall agree in writing the maximum loading or discharging rates to be employed, after taking into account the pressure surges to be expected on any automatic or manual operation of shut-off valves, including their emergency operation.

(2) The master and the installation owner shall each within their respective areas of operational responsibility ensure that

- (a) the agreed loading or discharging rate is not exceeded;
- (b) shut-off valves are fitted as close as practicable to the ends of all vessel and shore cargo pipelines or groups of such pipelines;
- (c) means are provided at a safe distance from such pipelines for the closure of such shut-off valves in an emergency; and
- (d) means are also provided at a safe distance from such pipelines, whereby compressors or pumps used in loading or discharging may be stopped in an emergency.

37. Gauges

(1) The harbourmaster may, if he so desires, satisfy himself that all pressure gauges connected with the loading or discharging of LG are functioning and that all relief valves can discharge to a safe place.

(2) During the operation of loading or discharging LG the master and the installation owner respectively shall ensure that the gauges fitted on the vessel's tanks and the shore tanks are continuously watched to ensure that no tank is overfilled.

38. Refrigerated gas

(1) No loading or discharging of refrigerated LG shall commence until the master and the installation owner have ensured that

- (a) suitable liquid and vapour lines are provided; and
- (b) all tanks and cargo pipelines have been gradually and evenly cooled to prevent thermal stress; and

(c) all automatic controls, gas detectors and temperature indicators associated with the cargo are in working order.

(2) Adequate arrangements shall be made for the removal of any vapours and condensate which may form in a cargo pipeline when the pipeline is being cooled.

(3) The master and the installation owner shall ensure that should there be pressure in the tanks for which they are responsible, which can cause them to become heated, the tanks and so far as may be necessary the nearby deck area are cooled by whatever means are available, including the use of water spray.

39. Spillage

(1) No LG shall be discharged or allowed to escape into the waters of a harbour area.

(2) If LG is found to be escaping or to have escaped into the waters of a harbour area from

- (a) an LGV; or
- (b) an LG storage installation;

the master, as the case may be, the installation owner, shall forthwith report the occurrence to the harbourmaster.

40. Inspection

The owner of any LG, and the owner of an LGV shall, when so required by the harbourmaster, afford him every reasonable facility to ascertain whether these byelaws are duly observed.

41. Completion of operation

(1) Every operation of loading or discharging LG shall be diligently carried out and immediately it has been completed the valves of the tanks shall be shut and every cargo pipeline and the vessel's loading or discharging pipes shall be cleared of liquid, purged, disconnected and blanked off.

(2) All cargo pipelines shall be maintained under a positive pressure after disconnection from the loading or discharging vessel and sufficient LG shall be left in each tank to maintain sufficient pressure so that no air is allowed to enter the tank.

(4) Every LGV shall leave the harbour area as soon as practicable after loading or discharging, except that it may remain for the purposes of taking on board bunkers, stores or ballast, or for such other purposes as may be specifically approved on each occasion by the harbourmaster, provided that the tanks and cargo pipeline valves are not re-opened while the LGV is within the harbour area except with the permission of the harbourmaster.

42. *Responsibility for compliance with byelaws*

(1) Any person who

- (a) by his act or omission causes a contravention of or a failure of compliance with any provision of these byelaws or any direction or prohibition imposed by the harbourmaster to secure compliance with any such provision; or
- (b) being a person designated under paragraph (2) below as responsible, knowingly permits such contravention or failure to occur; shall be guilty of an offence and liable on summary conviction to a fine not exceeding £100.

(2) Without prejudice to the generality of paragraph (1) above, in relation to any vessel the master thereof, and in relation to any goods the owner, shall except as otherwise provided be responsible for complying with these byelaws and with any direction or prohibition given or imposed thereunder, and liable to any penalty imposed for a contravention of such byelaws or directions.

(3) Where the commission by any person of an offence under these byelaws is due to the act or default of some other person, that other person shall be guilty of the offence, and the person may be charged with and convicted of an offence by virtue of this byelaw whether or not proceedings for the offence are taken against any other person.

(4) In any proceedings for an offence under these byelaws it shall be a defence for the person charged to prove

- (a) that he took all reasonable precautions and exercised all due diligence to avoid the commission of the offence; or
- (b) that he had a reasonable excuse for his act or failure to act.

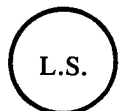
(5) If in any case a defence provided by paragraph (4) (a) above involves the allegation that the commission of the offence was due to the act or default of another person, the person charged shall not, without leave of the court, be entitled to rely on that defence unless, within a period ending 7 clear days before the hearing, he has served on the prosecutor a notice in writing giving such information identifying or assisting in the identification of that person as was then in his possession.

Given under the Common Seal of the Orkney Islands Council this 7th day of November, 1978.

GEORGE STEVENSON *Member*

EDWIN R. EUNSON *Member*

H. A. GRAEME LAPSLEY *Chief Executive*



The Secretary of State hereby confirms the foregoing byelaws.

Signed by authority of the Secretary of State this 1st day of May, 1979.

DAVID EDMONDS An Assistant Secretary in the Department of Transport.

(Byelaw 2) SCHEDULE I

HARBOUR JURISDICTION ON THE COUNCIL

1. Scapa Flow

The area bounded as follows:

Commencing at the Out Taings point on Hoy;

Thence in a straight line to Breckness on Mainland;

Thence in a generally eastern direction following the line of low

water on the southern boundaries of Mainland to the northern end of the northernmost Churchill Barrier;

Thence in a generally southerly direction following the western sides of the four Churchill Barriers and the lines of low water on the western boundaries of the islands of South Ronaldsay (other than Swona) to Brough Ness;

Thence in a generally western direction by a straight line to the southernmost part of Swona and a straight line from that point to Brims Ness on South Walls on the island of Hoy;

Thence following the line of low water on the western and northern sides of Aith Hope and the seaward boundaries of South Walls and of Hoy to the point of commencement.

2. Wide Firth/Shapinsay Sound

The area bounded as follows:

Commencing at Harpy Taing on Mainland;

Thence in a straight line to Strombery on Shapinsay;

Thence following the line of low water on the southern boundary of Shapinsay to Hacksness;

Thence in a straight line to Rerwick Point on Mainland;

Thence in a generally westerly and north-easterly direction following the line of low water on part of the northern boundary of Mainland to the point of commencement.

3. Whitehall

That part of Papa Sound within a distance of I kilometre in any direction from the landward end of Whitehall Pier (590 08' 32" N, 020 35' 44" W).

4. Other Harbours

In relation to each of the harbours designated in the first column of the following table, the area of tidal waters within I kilometre in any direction from the landward end of the pier or jetty specified in relation to that harbour in the second and third columns of the table.

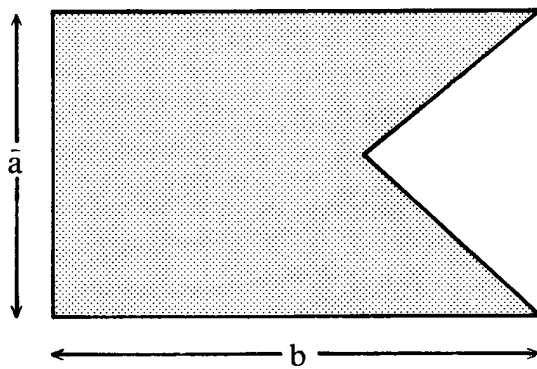
TABLE

(1) Harbour	(2) Pier or Jetty	(3) Latitude and Longitude of Landward End
North Ronaldsay	North Ronaldsay Pier	59° 21' 18" N 02° 26' 20" W
Papa Westray	Papa Westray Pier	59° 19' 37" N 02° 53' 13" W
Pierowall	Gill Pier	59° 19' 27" N 02° 58' 19" W
Kettletoft	Kettletoft Pier	59° 13' 56" N 02° 35' 54" W
Backaland	Backaland Pier, Eday	59° 09' 21" N 02° 44' 39" W
Trumland	Trumland Pier, Rousay	59° 07' 50" N 02° 59' 10" W
Egilsay	Egilsay Pier	59° 09' 22" N 02° 56' 26" W
Wyre	Wyre Pier	59° 07' 30" N 02° 58' 14" W
Tingwall	Tingwall Jetty	59° 05' 22" N 03° 02' 29" W

(Byelaw 6)

SCHEDULE 2

Flag "B" of the International Code of Signals (Red flag to be flown)



Dimensions:

"a" shall not be less than 75 centimetres (29.5 inches) for a ship and 45 centimetres (17.7 inches) for a harbour craft.

"b" shall not be less than 90 centimetres (35.4 inches) for a ship and 54 centimetres (21.3 inches) for a harbour craft.

