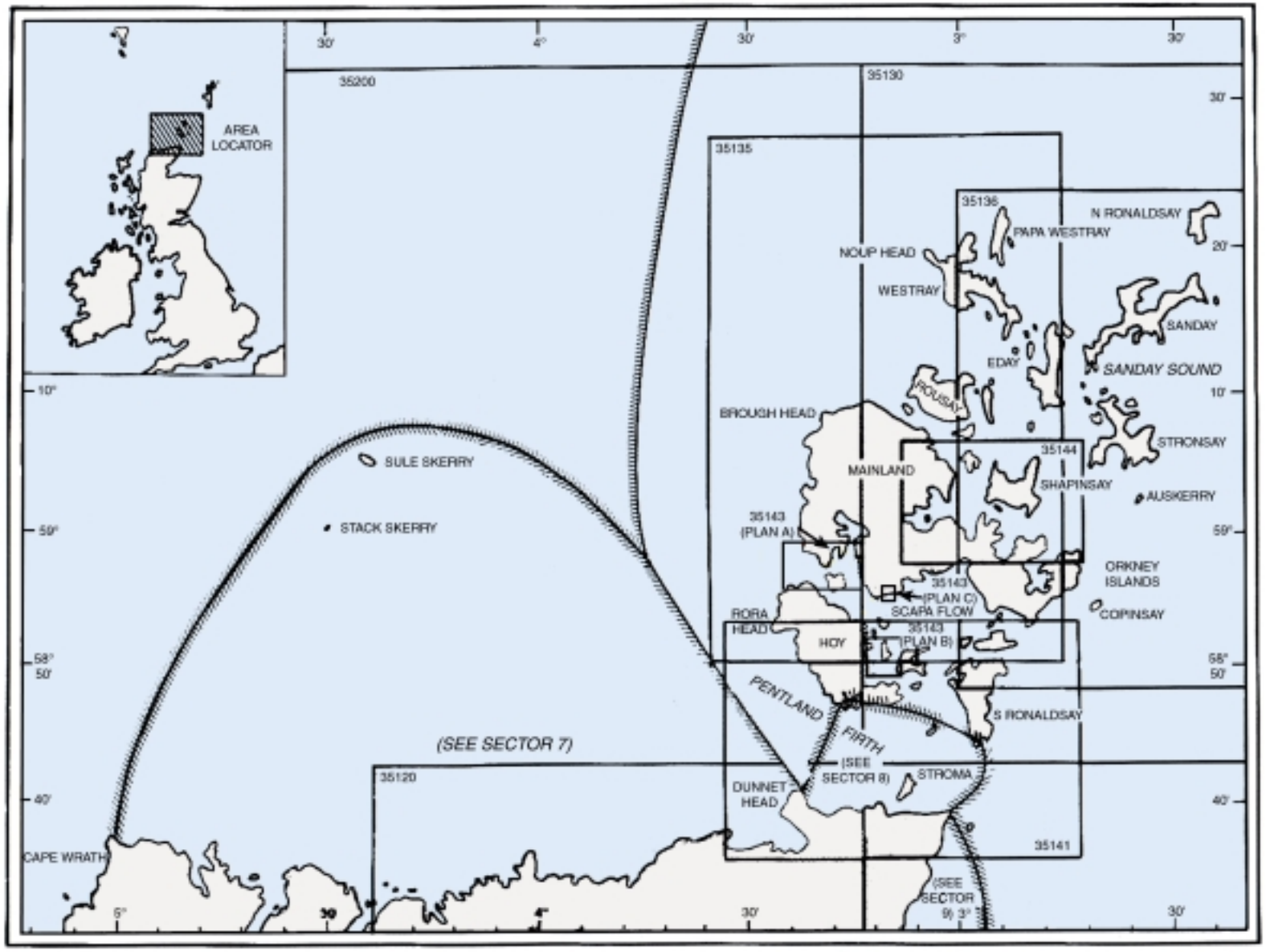

Additional chart coverage may be found in CATP2, Catalog of Nautical Charts.

SECTOR **14** — CHART INFORMATION

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Table of Contents

SECTOR 14

THE ORKNEY ISLANDS

Plan.—The W and N coasts of the Orkney Islands are described in this sector. North Sound and North Ronaldsay Firth are also included. The descriptive sequence is generally from S to N and then from W to E.

General Remarks

14.1 The Orkney Islands, which are separated from the E part of the N coast of Scotland by Pentland Firth, consists of a group of 56 islands, 29 of which are inhabited, and numerous rocky islets. In general, all the islands in the group are low, irregular-shaped, and comparatively steep-to on their seaward sides.

Mainland, the largest and most important island of the group, is about 22 miles long and lies in a NW and SE direction. Kirkwall and Stromness, the principal towns of the Orkney Islands, are situated on Mainland. Several lakes are to be found on each of the larger islands of the group. Loch Stenness and Loch Harray, on Mainland, are the largest, each of which is over 3 miles long. Hoy, the SW most island, is the only one that can be considered mountainous. Ward Hill, located near the center of the N part of that island, has an elevation of 475m and is the highest mountain in the Orkneys.

The Orkney Islands are divided into two groups by Westray and Stronsay Firths. Mainland, Hoy, and several of the other larger islands lie S of these firths. Those islands lying N of them are known locally and collectively as the North Isles. The waterway formed by Westray and Stronsay Firths is wide, deep, and straight in contrast to the numerous other firths and sounds that intersect the group, most of which are narrow, constricted, and shoal-encumbered.

The E side of the Orkney Islands has no dangers outside the 60m curve, which runs in a NNE direction and lies about 2 miles seaward of the salient points of the various islands. This curve is nearly straight and does not extend into the various firths and sounds. Outside the 60m curve and S of Lamb Head, the SE extremity of Stronsay, the bottom is very regular and consists of fine sand for up to a distance of about 10 miles offshore. North of Lamb Head, the character of the bottom changes to broken shells. At a distance of about 3 miles E of Start Point, the E extremity of Sanday, the bottom consists of rock and broken mussel shells, and E of North Ronaldsay, the NE most island of the Orkneys, it is rocky and uneven.

Soundings on the W side of the Orkney Islands are not as helpful as on the E side as the depths are great and there is little variation in the character of the bottom when in the vicinity of the several off-lying banks. Nun Rock, Sule Skerry, Stack Skerry, and their adjacent banks are described in Sector 7. North Shoal, the other off-lying danger in the W approach to the Orkney Islands, is described in this sector.

Tides—Currents.—The charts on the following pages show the tidal currents at hourly intervals commencing 6 hours before HW at Dover and ending 6 hours after HW at Dover.

On the charts, the directions of the tidal currents are shown by arrows which are graded in weight and, where possible, in length to indicate the approximate rate of the current. Hence, an arrow shown in regular type indicates a weak current. If the arrow is shown in bold face type, a strong current is indicated.

The figures appearing against the arrows reflect the mean neap and spring rates in tenths of a knot. Hence, "19, 34" indicates a mean neap rate of 1.9 knots and a mean spring rate of 3.4 knots. The comma indicates the approximate position at which the observations were obtained.

Pilotage.—The Orkney Harbors Navigation Service is available to all vessels navigating in Scapa Flow, Wide Firth, Shapinsay Sound, and Kirkwall Bay.

For Wide Firth, Shapinsay Sound, and Kirkwall Bay, pilotage is compulsory for all passenger vessels over 65m in length and all other vessels over 80m in length. An ETA at Rerwick Head should be sent at least 12 hours in advance to Orkney Harbor Radio with amendments at least 2 hours in advance. Pilots board about 0.8 mile NW of Rerwick Head, but the pilot vessel is on station only when a vessel is expected.

For Scapa Flow and its approaches, pilotage is compulsory for all passenger vessels over 65m in length. An ETA at Cantick Head should be sent at least 12 hours in advance with amendments at least 2 hours in advance. Pilots board about 1.5 miles S of Cantick Head, or 1 mile NE of North Head Light (Swona) for vessels passing E of Swona; the pilot vessel is on station only when a vessel is expected.

Vessels should contact Orkney Harbor Radio on VHF before entering or moving within Scapa Flow and a listening watch should be maintained on VHF, channel 16. The Navigation Service also provides details of ship movements and navigational information.

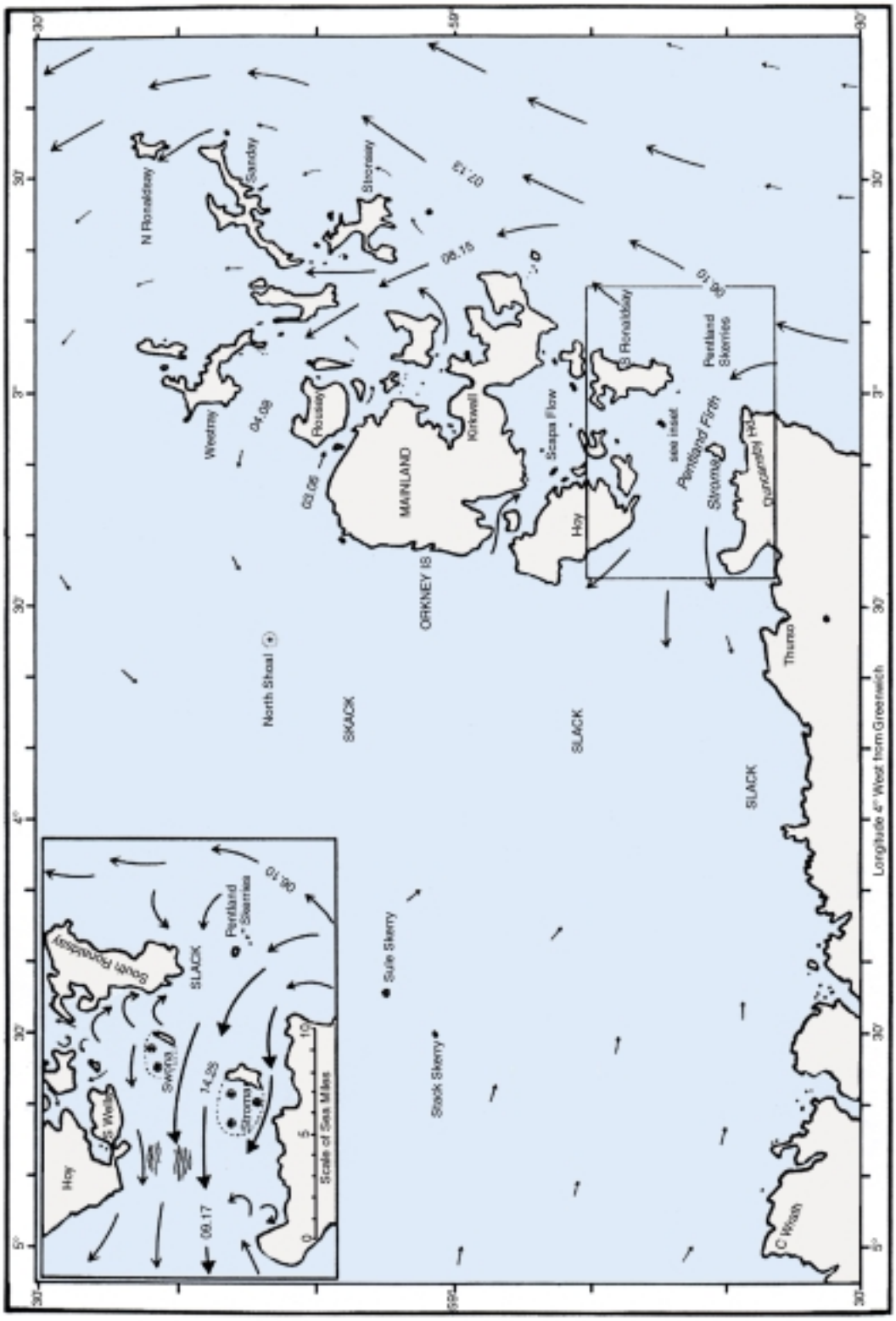
Caution.—Marine farms, which may be fixed or floating structures, and their associated moorings may be encountered in the inner waters of the islands. They are generally marked by buoys or beacons.

An Area to be Avoided, whose limits are best seen on the chart, has been established around the Orkney Islands. In order to avoid the risk of oil pollution and severe damage to the environment of the Orkneys, vessels greater than 5,000 grt carrying oil or other hazardous cargo in bulk should avoid this area.

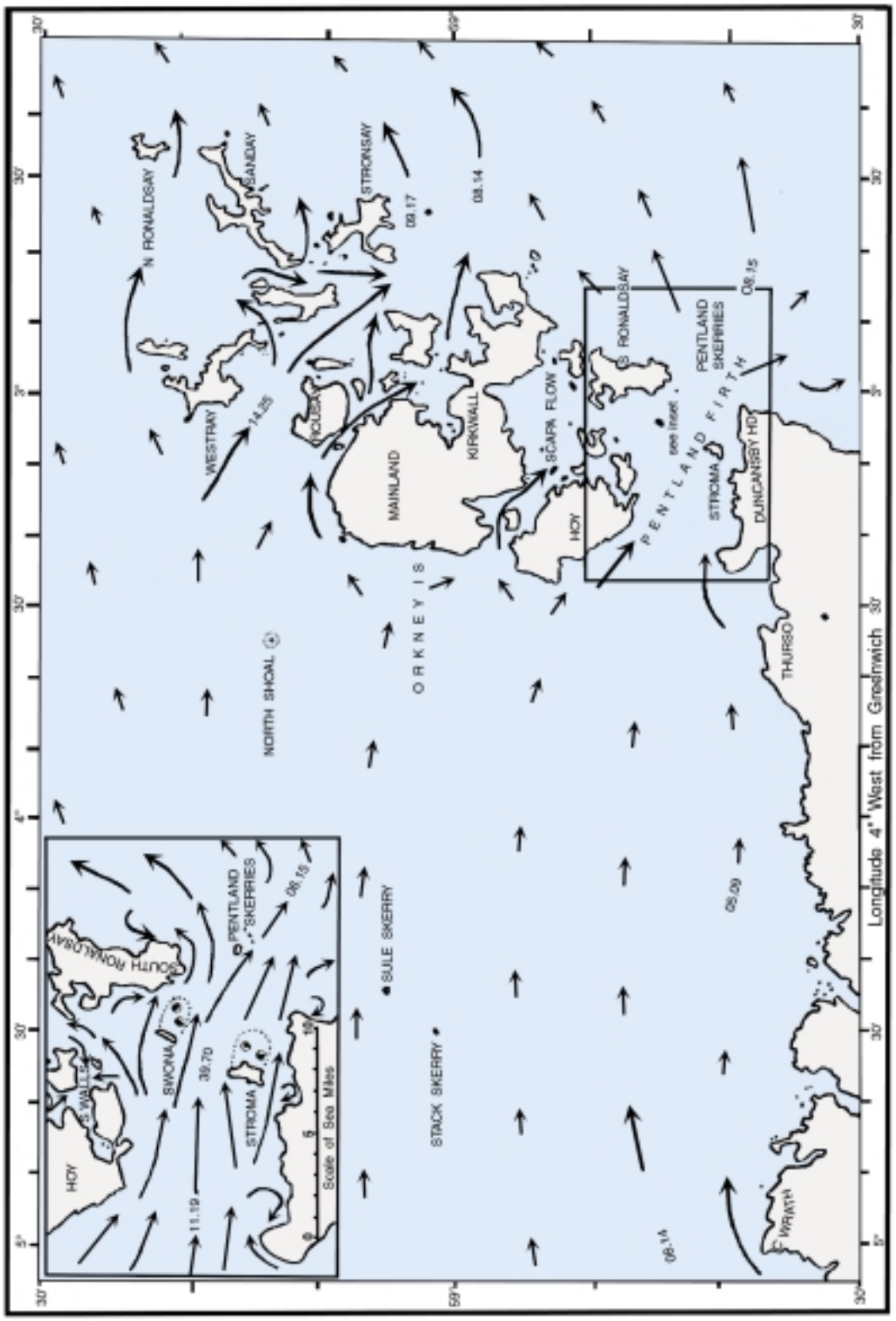
West Coasts—Tor Ness to Bow Head

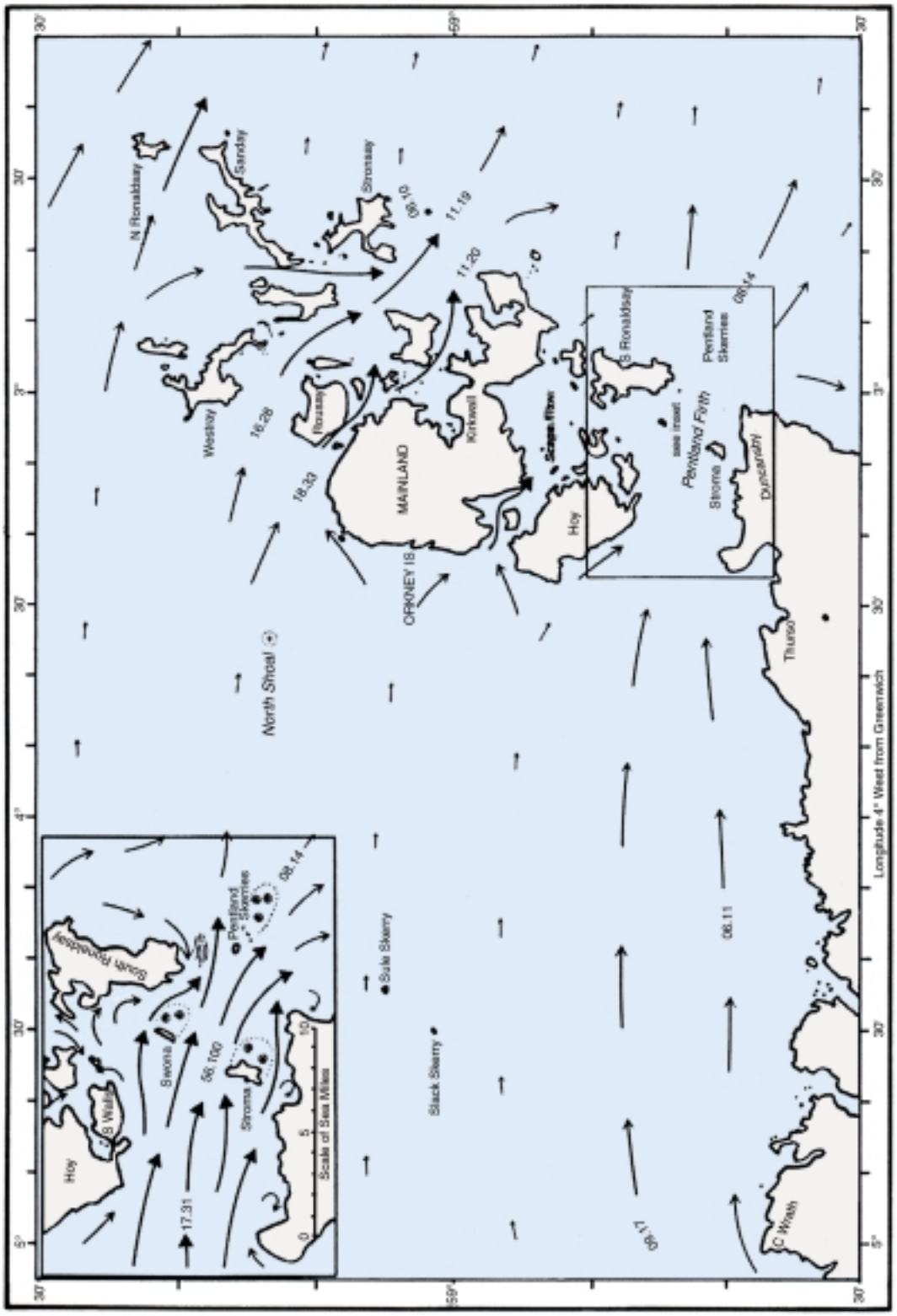
14.2 **Tor Ness** (58˚46'N., 3˚17'W.), the SW point of Hoy, is low and flat. Rocks extend up to 0.1 mile SW of this point. A light is shown from a tower, 7m high, standing on the point.

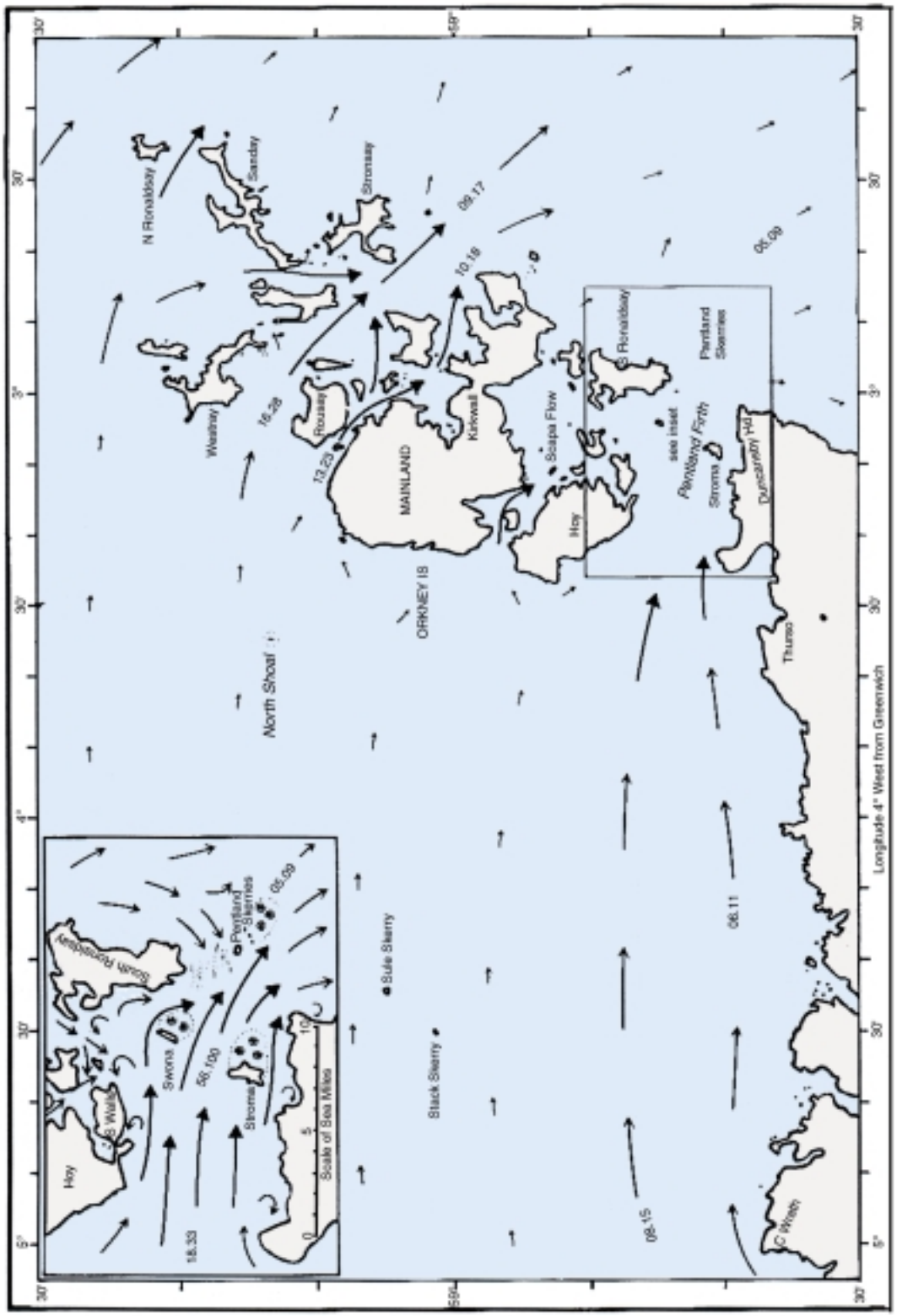
Between Tor Ness and Sneuk Head, 4.3 miles NNW, the coast, which is fringed by a narrow reef, is generally low except for The Berry, a reddish-colored cliff. This cliff is 180m high and rises 1.5 miles NNW of Tor Ness. A steep-to rock, with a least depth of 1.8m, lies about 0.3 mile offshore, 1 mile NNW of The Berry.


N Ronaldsay
Sanday
Stronsay
Westray
Rousay
MAINLAND
Kirkwall
Scapa Flow
Hoy
S Ronaldsay
Pentland Skerries
Pentland Firth
Stroma
Dunnet Hd
ORKNEY IS
North Shoal
SLACK
SLACK
SLACK
Thurso
Sule Skerry
Stack Skerry
C Wrath
Longitude 4° West from Greenwich
Pentland Skerries
SLACK
Swona
Stroma
Hoy
S Walls
Scale of Sea Miles
0
5
10
6 HOURS BEFORE HIGH WATER AT DOVER
4 HOURS AFTER HIGH WATER AT ABERDEE


N Ronaldsay
Sanday
Eastside
09.16
Westray
Rousay
MAINLAND
Kirkwall
Scapa Flow
Hoy
S Ronaldsay
Pentland Skerries
see inset
Pentland Firth
Stroma
Duncansby Hd
ORKNEY IS
North Shoal
SLACK
Thurso
Sule Skerry
Black Skerry
03.06
04.07
Wick
Longitude 4° West from Greenwich
5 HOURS BEFORE HIGH WATER AT DOVER
5 HOURS AFTER HIGH WATER AT ABERDEEN
Rousay
Hoy
S Walls
Swona
22.40
Stroma
Pentland Skerries
SLACK
Scale of Sea Miles
0
5
10


N RONALDSAY
SANDAY
STRONSAY
WESTRAY
NORTH SHOAL
MAINLAND
KIRKWALL
SCAPA FLOW
HOY
RONALDSAY
PENTLAND SKERRIES
STROMA
DUNCANSBY HD
PENTLAND FIRTH
see inset
ORKNEY IS
THURSO
SULE SKERRY
STACK SKERRY
WRATH
SOUTH RONALDSAY
SWONA
Scale of Sea Miles
11.19
39.70
08.14
08.17
08.15
08.59
08.14
Longitude 4° West from Greenwich
4 HOURS BEFORE HIGH WATER AT DOVER
6 HOURS AFTER HIGH WATER AT ABERDEEN


MAINLAND
Westray
Sanday
N Ronaldsay
Stronsay
Rousay
Kirkwall
Scapa Flow
Hoy
S Ronaldsay
Pentland Skerries
Pentland Firth
Stroma
Dunnet Head
ORKNEY IS
North Shoal
Thurso
Duncansby Head
Longitude 4° West from Greenwich
Sule Skerry
Stack Skerry
C Wrath
Boyce Ronaldsay
Swona
S Walls
Scale of Sea Miles
0
5
10
3 HOURS BEFORE HIGH WATER AT DOVER
5 HOURS 20 MIN. BEFORE HIGH WATER AT ABERDEEN


N Ronaldsay
Sanday
Stronsay
Westray
Rousay
MAINLAND
Kirkwall
Scapa Flow
Hoy
S Ronaldsay
Pentland Skerries
see inset
Pentland Firth
Stroma
Dunnet Hd
ORKNEY IS
North Shoal
Thurso
Sule Skerry
Stack Skerry
Wick
Longitude 4° West from Greenwich
2 HOURS BEFORE HIGH WATER AT DOVER
4 HOURS 20 MIN. BEFORE HIGH WATER AT ABERDEEN
Duncansby Head
Swona
Scale of Sea Miles
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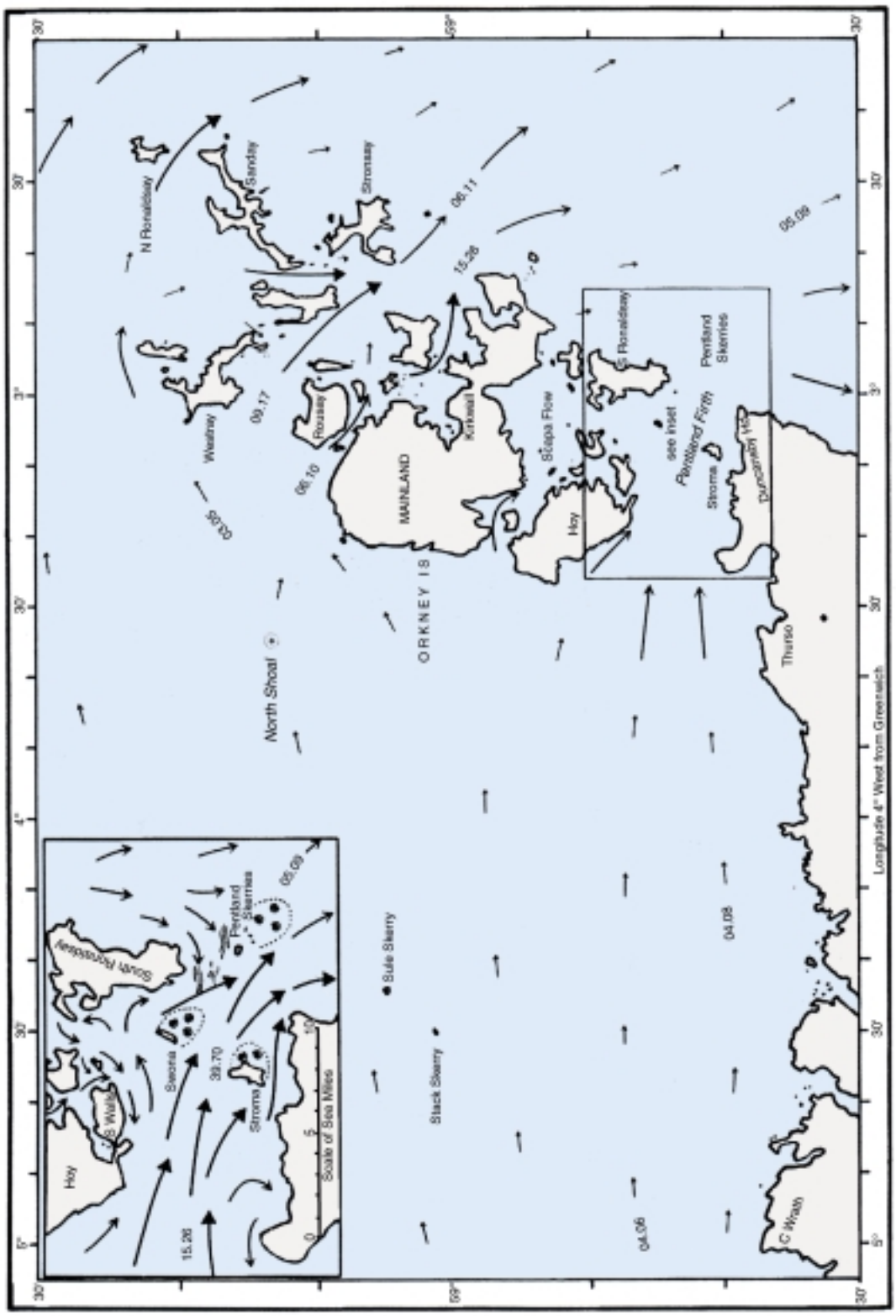
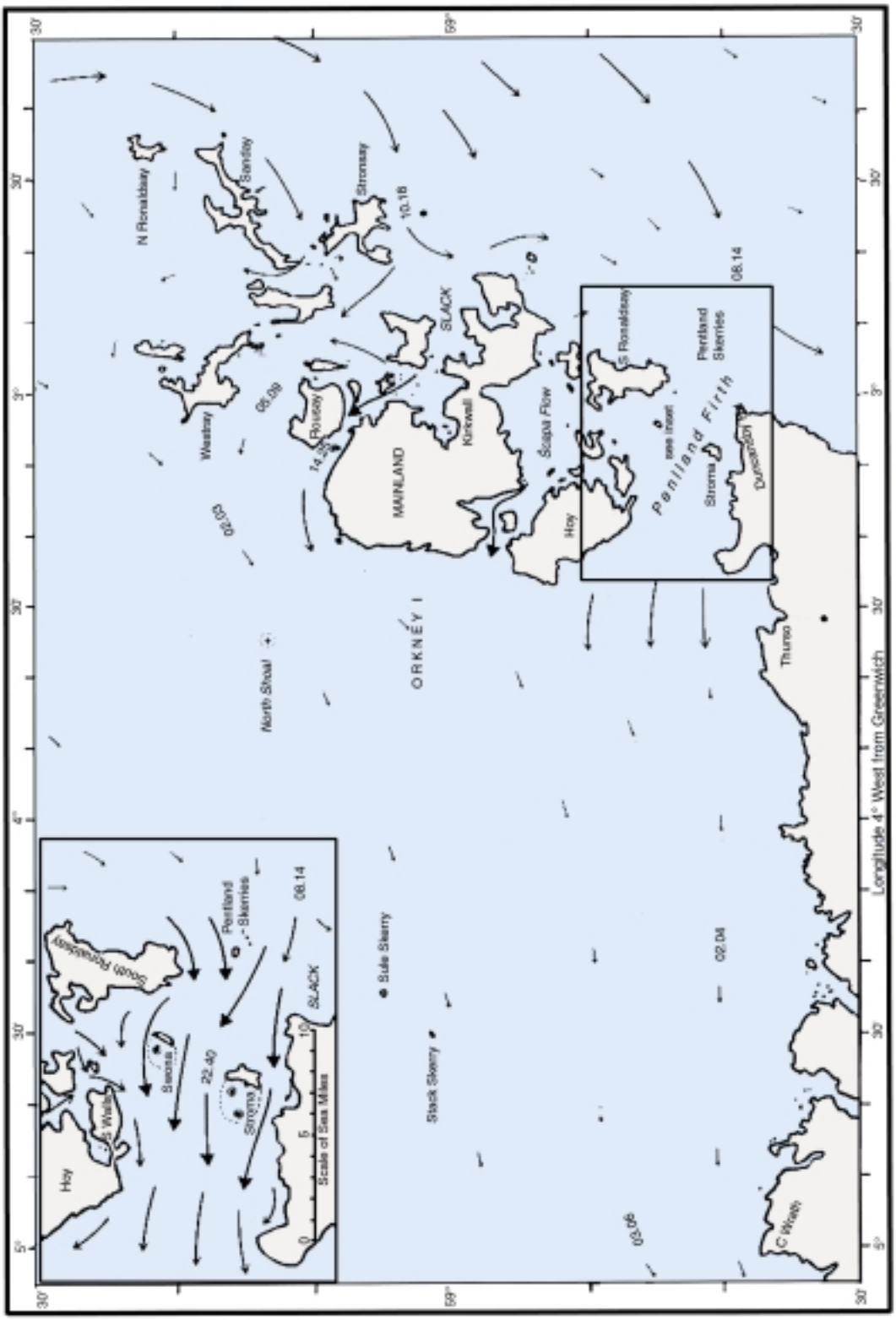
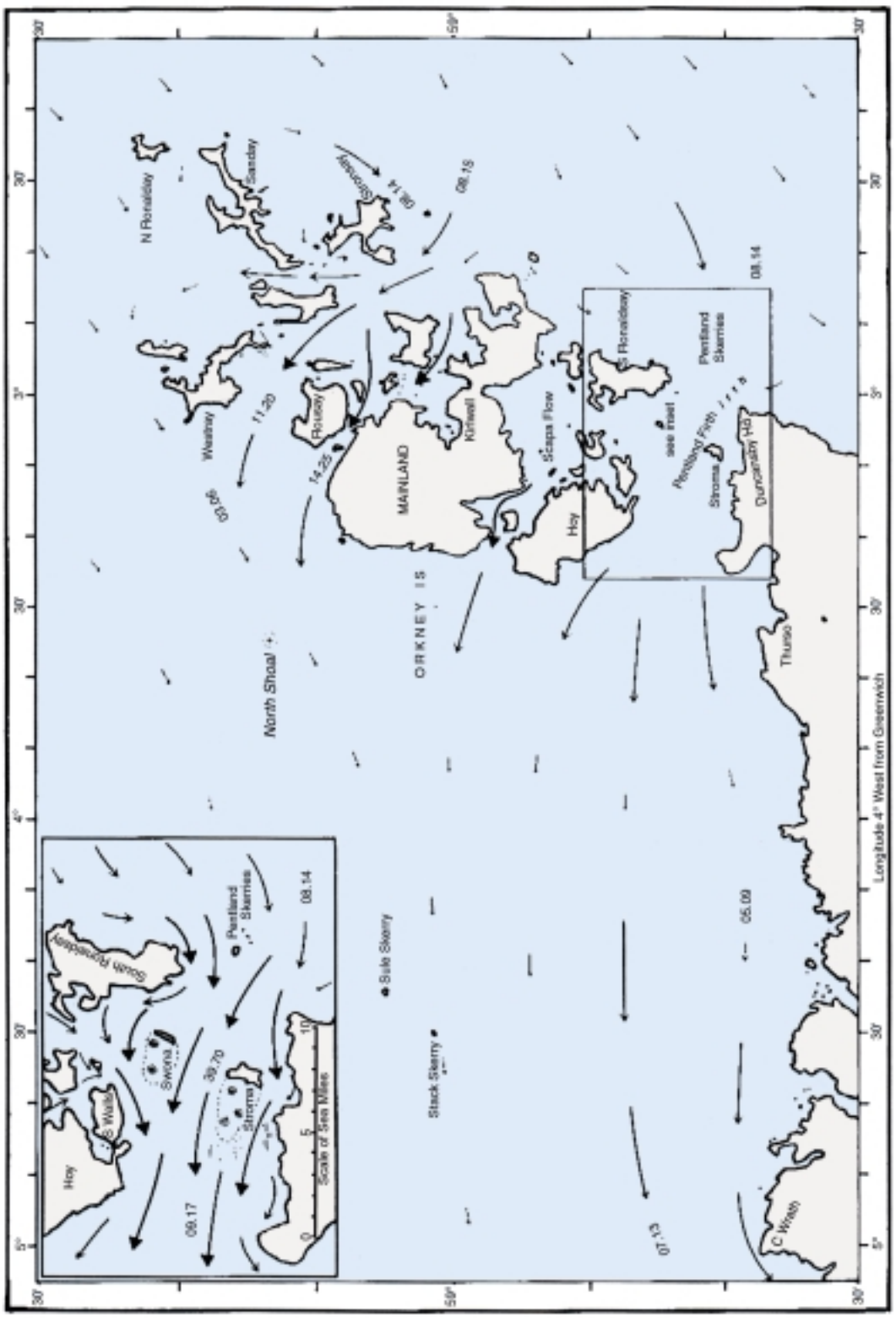
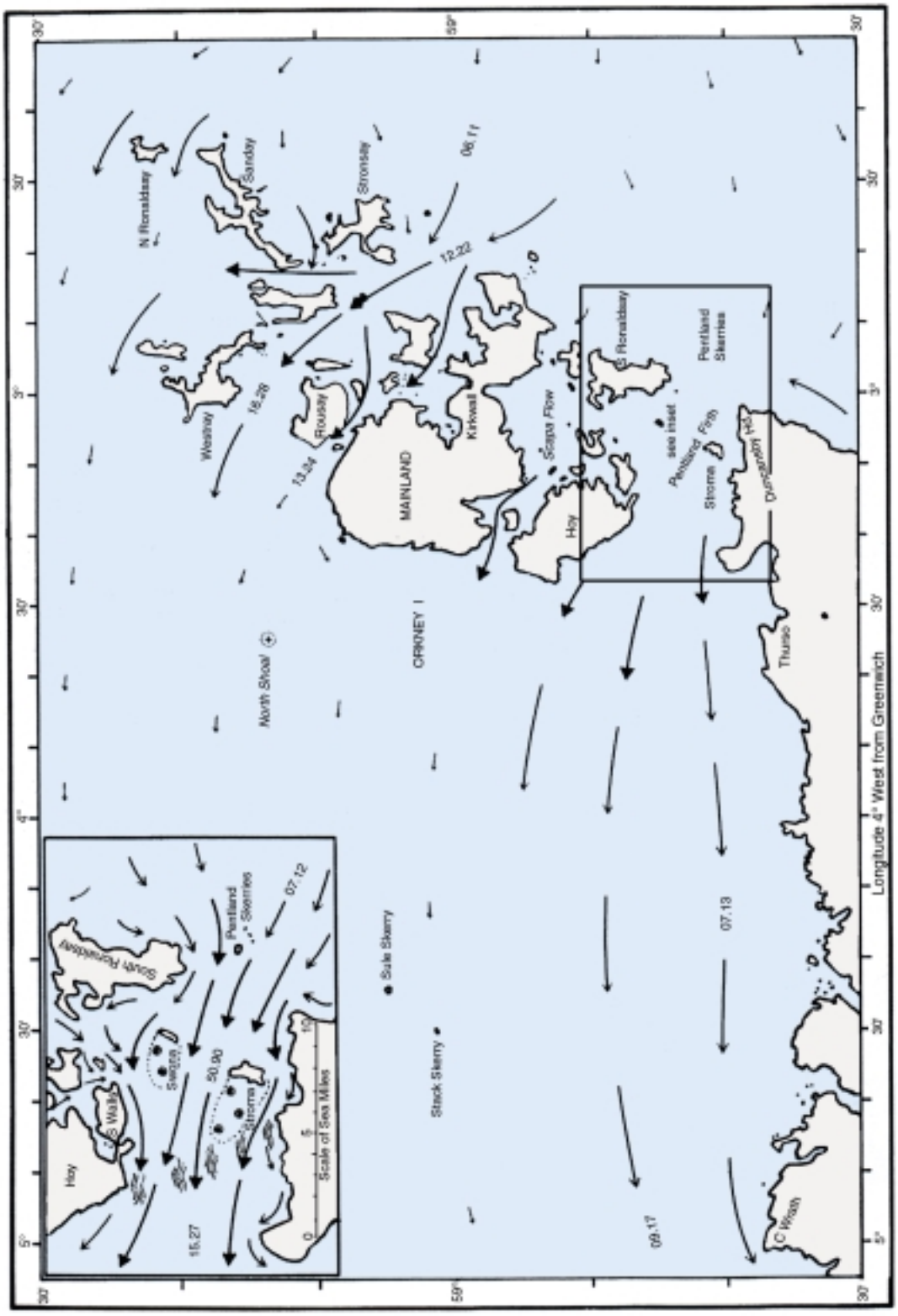
10.16
09.17
06.09
06.11
08.15
18.33
56 10p
05.09

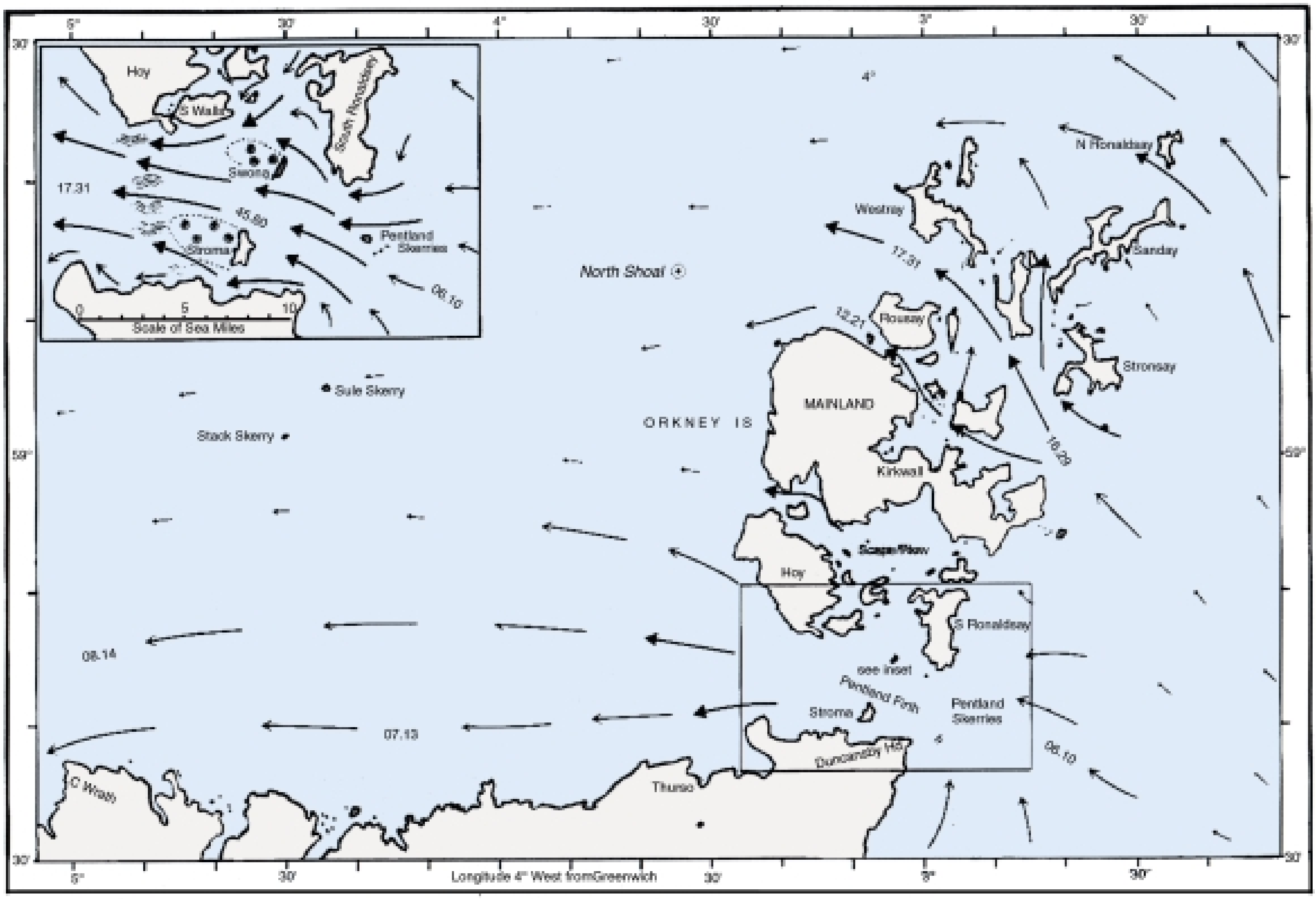

ORKNEY IS
MAINLAND
North Shoal
Sule Skerry
Stack Skerry
N Ronaldsay
Sanday
Stronsay
Westray
Rousay
Kirkwall
Scapa Flow
Hoy
S Ronaldsay
Pentland Firth
Stroma
Pentland Skerries
see inset
Duncansby Hd
Thurso
Longitude 4° West from Greenwich
1 HOUR BEFORE HIGH WATER AT DOVER
3 HOURS 20 MIN. BEFORE HIGH WATER AT ABERDEEN
Orkney Islands
Swona
Scale of Sea Miles


N Ronaldsay
Sanday
Stronsay
Westray
Rousay
MAINLAND
Kirkwall
Scapa Flow
S Ronaldsay
Pentland Skerries
Pentland Firth
Stroma
Hoy
Duncansby Hd
ORKNEY IS
North Shoal
Thurso
Longitude 4° West from Greenwich
Duncansby Hd
Swona
Stroma
Pentland Skerries
Scale of Sea Miles
Sule Skerry
Stack Skerry
SLACK
SLACK
C Wrath
HIGH WATER AT DOVER
2 HOURS 20 MIN. BEFORE HIGH WATER AT ABERDEEN

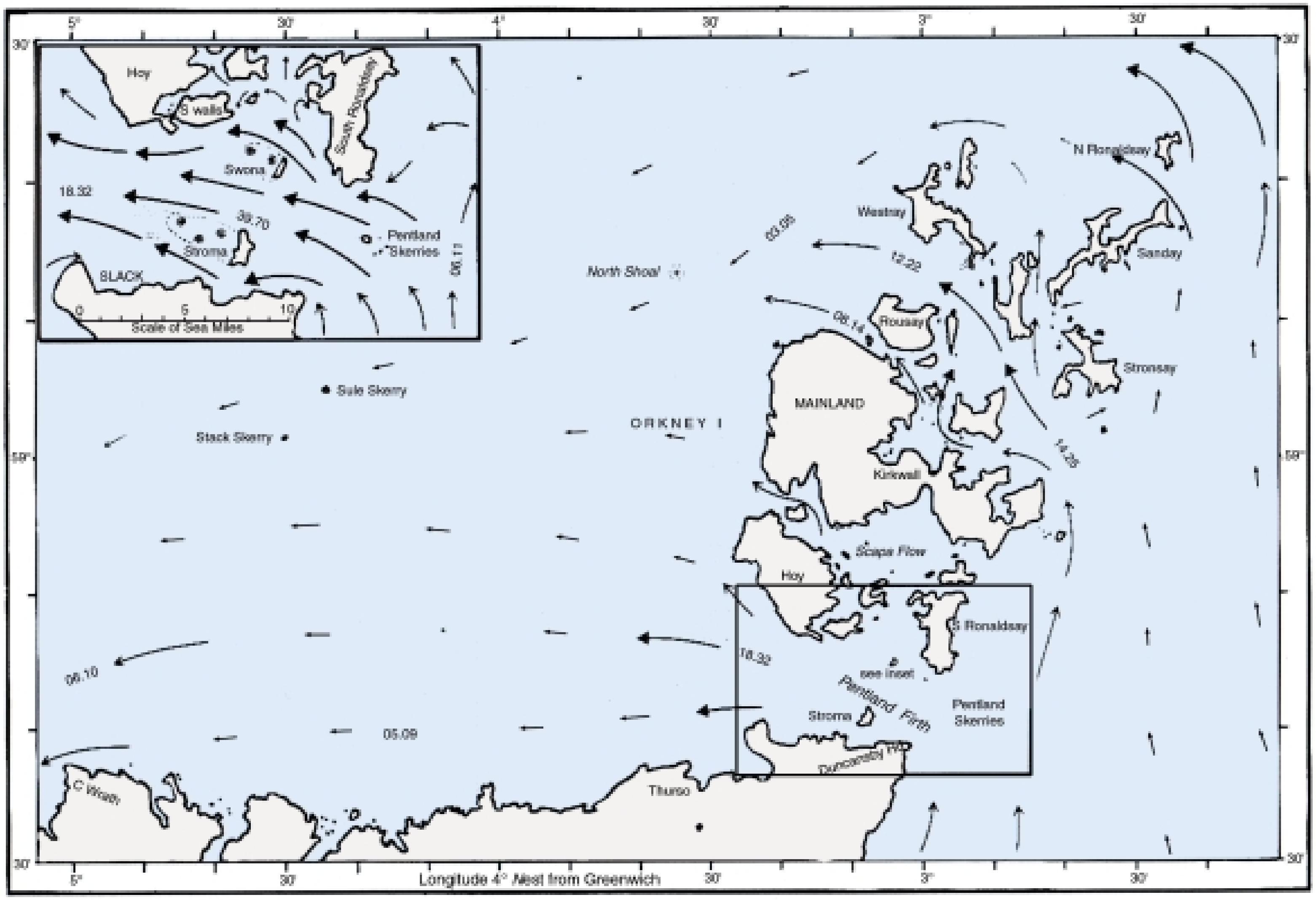

N Ronaldsay
Sanday
Stronsay
10.18
Westray
05.09
Rousay
14.20
MAINLAND
SLACK
Kirkwall
Scapa Flow
Hoy
S Ronaldsay
Pentland Skerries
08.14
Pentland Firth
see inset
Stroma
Dunnet Head
ORKNEY I
North Shoal
Thurso
Sule Skerry
Stack Skerry
02.04
03.06
Orkney
Longitude 4° West from Greenwich
Hoy
S Walls
South Ronaldsay
Swona
22.40
Stroma
Pentland Skerries
08.14
SLACK
Scale of Sea Miles
0
5
10
1 HOUR AFTER HIGH WATER AT DOVER
1 HOUR 20 MIN. BEFORE HIGH WATER AT ABERDEEN


N Ronaldsay
Sanday
Westray
Rousay
MAINLAND
Kirkwall
Scapa Flow
Hoy
S Ronaldsay
Pentland Skerries
Stroma
Duncansby Hd
Thurso
ORKNEY IS
North Shoal
Skerry
Stack Skerry
C Wrath
Longitude 4° West from Greenwich
2 HOURS AFTER HIGH WATER AT DOVER
0 HOURS 20 MIN. BEFORE HIGH WATER AT ABERDEEN
Swona
Scale of Sea Miles

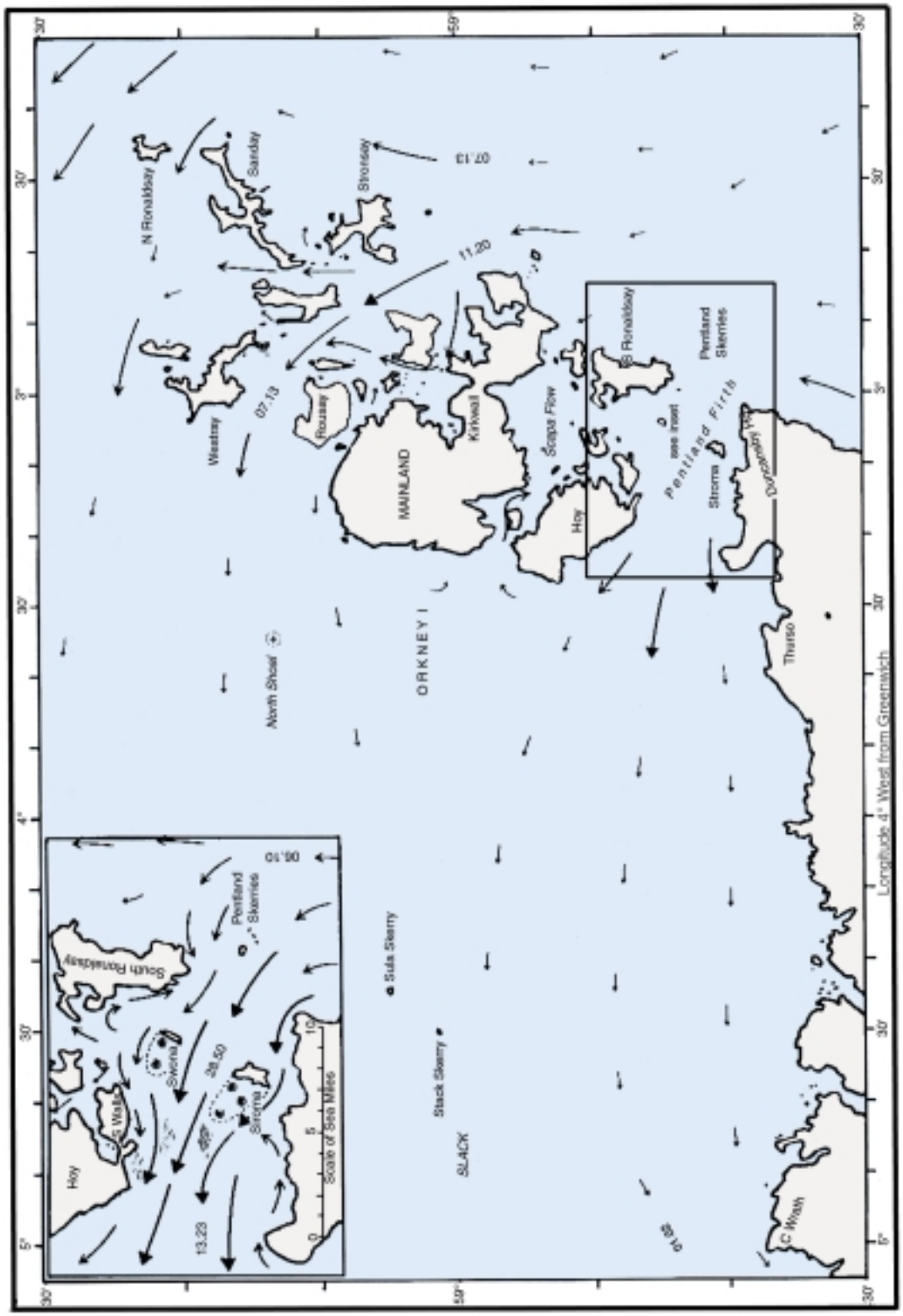

3 HOURS AFTER HIGH WATER AT DOVER
0 HOURS 40 MIN. AFTER HIGH WATER AT ABERDEEN
Longitude 4° West from Greenwich
MAINLAND
ORKNEY I
Hoy
Scapa Flow
Kirkwall
Stromness
Thurso
Sule Skerry
Stack Skerry
North Shoal
Pentland Skerries
Pentland Firth
Duncansby Head
C Wrath
N Ronaldsay
Sanday
Stronsay
Westray
Rousay
S Ronaldsay
Swona
Scale of Sea Miles
06.11
12.22
18.28
13.34
07.13
09.17
15.27
50.90
07.12



4 HOURS AFTER HIGH WATER AT DOVER
1 HOUR 40 MIN. AFTER HIGH WATER AT ABERDEEN



5 HOURS AFTER HIGH WATER AT DOVER
2 HOURS 40 MIN. AFTER HIGH WATER AT ABERDEEN


N Ronaldsay
Sanday
Stronsay
07.13
11.20
Westray
07.13
Rousay
MAINLAND
Kirkwall
Scapa Flow
Hoy
S Ronaldsay
Pentland Skerries
Pentland Firth
Stroma
Duncansby Head
ORKNEY I
North Shoal
Thurso
Sula Skerry
Stack Skerry
SLACK
C Wrath
Longitude 4° West from Greenwich
South Ronaldsay
Swona
Stroma
08.50
13.23
Scale of Sea Miles
0
5
10
6 HOURS AFTER HIGH WATER AT DOVER
3 HOURS 40 MIN. AFTER HIGH WATER AT ABERDEEN

ST JOHN'S HEAD FROM S

OLD MAN OF HOY FROM S

Rora Head (58˚52'N., 3˚26'W.), the W point of Hoy and also the W point of the Orkney Islands, rises to a height of 101m, 3 miles NW of Sneuk Head.

The central part of Hoy consists of rugged hills and valleys that decrease in height to the SE and S.

Kame of Hoy (58˚55'N., 3˚24'W.), the S entrance point of Hoy Mouth, lies 3 miles NNE of Rora Head. High, red cliffs rise from the shoreline along this stretch of the coast.

The Old Man of Hoy, a remarkable detached pinnacle rock, is 136m high and stands on the coast 1 mile N of Rora Head. St. John's Head, 346m high and prominent, is located 2 miles NNE of Rora Head.

Ward Hill, 478m high, rises 2.5 miles E of St. John's Head and is the summit of Hoy. Cuilags (West Hill), 434m high, is conspicuous and stands 1 mile NW of Ward Hill. A deep valley extends across the island between these two mountains.

Mainland

14.3 Breck Ness (58˚58'N., 3˚21'W.), a low peninsula, is 10m high. It forms the SW point of Mainland and the N entrance point of Hoy Mouth. The ruins of Breckness House stand near the shore on the SE side of the peninsula. A narrow reef fringes the shore in the vicinity of Breck Ness and depths of 5m extend up to 0.5 mile offshore. Braga Skerry, a rock which dries 1.5m, lies about 0.2 mile SW of Breck Ness and the sea breaks heavily over it during gales.

Row Head (59˚03'N., 3˚21'W.), located 5 miles N of Breck Ness, is the S entrance point of the Bay of Skaill. Cliffs, over 30m high, front the intervening shoreline. Strowa Skerry, a detached rock, lies close offshore, 1 mile N of Breck Ness.

In thick weather, Row Head can be mistaken for Kame of Hoy, where the cliffs are considerably higher.

The Bay of Skaill, shallow with a sandy beach at its head, lies between Row Head and Verron Point, 0.5 mile NNE. Marwick Head, 86m high, is located 3 miles N of Row Head. Marwick, a small drying bay, lies close S of this headland. The Kitchener Memorial, a rectangular stone tower, is 13m high and stands on the N side of Marwick Head.

KITCHENER MEMORIAL

Birsay Bay is entered between Marwick Head and Brough Head, 2 miles NNE. This shallow bay affords no shelter and depths of less than 5.5m extend up to 0.5 mile offshore.

Brough Head (59˚08'N., 3˚20'W.) is the W extremity of Brough of Birsay. This headland, which is connected to the mainland by a drying reef, usually appears as an island. It can be identified by an unusual triangular-shaped rock lying close off the NW extremity. A light is shown from a prominent tower, 11m high, standing on Brough Head.

BROUGH OF BIRSAY LIGHT FROM N

Costa Head (59˚09'N., 3˚12'W.), the NE extremity of Mainland and the SW entrance point of Eynhallow Sound, is 122m high. Standard Rock lies close offshore about 0.8 mile W of the point. Costa Hill, 149m high, rises close S of the point and helps to identify it.

Caution.—North Shoal (59˚13'N., 3˚35'W.), a small and almost perpendicular rock, lies about 9 miles NW of Brough Head and has a least depth of 2.1m. Depths in the vicinity of this rock are uneven. With W gales, the sea breaks heavily over North Shoal and its position is marked by tide rips during calm weather.

Rousay

14.4 Quoynalonga Ness (59˚10'N., 3˚07'W.), the low, shelving point at the W extremity of Rousay, is the NE entrance point of Eynhallow Sound, the passage separating Mainland from Rousay. Sacquoy Head, a low and reef-fringed cape, lies 2 miles NNE of Quoynalonga Ness, at the N end of Rousay, and forms the S entrance point of Westray Firth.

Westray

14.5 Inga Ness (59˚17'N., 3˚01'W.), the N entrance point of Westray Firth, lies 5 miles NNE of Sacquoy Head.

Noup Head (59˚20'N., 3˚04'W.), 75m high, lies 3.5 miles NNW of Inga Ness. This point, which is marked by a light, forms the NW extremity of Westray. The Lees, a group of flat and above-water skerries, extends 0.2 mile NW from the point. A narrow passage leads between the group and the point.

From Noup Head, the N coast of Westray trends in a general NE direction for 4 miles to Bow Head. Depths of less than 9m extend up to 0.8 mile offshore along the intervening bight.

Bow Head (59˚22'N., 2˚57'W.), the N extremity of Westray, forms the W entrance point of the N entrance to Papa Sound, which separates Westray and Papa Westray. The Bow, a drying rock, lies on a reef that extends 0.5 mile N from Bow Head. With any swell, the sea breaks over this rock and breakers extend across the N entrance to Papa Sound during gales. Tide rips occur over a bank, with a depth of 21m, which lies about 3 miles N of Bow Head.

Tides—Currents.—The velocity of the tidal currents between Tor Ness and Noup Head generally does not exceed 1 knot at springs, except in the vicinity of North Shoal, where a velocity of about 2 knots has been observed. The E current divides off Rora Point, one part running SE toward Tor Ness and the other running NE toward Hoy Sound.

The W current appears to run regularly along the coast between Tor Ness and Rora Point, and then to the entrance of Hoy Sound, the current runs almost continuously N and NE. The velocity of the current between Tor Ness and the entrance to Hoy Sound usually does not exceed 1 knot at springs. The effect of the W current may be felt for a considerable distance to seaward.

The E current also divides near Bay of Skaill, one part running S toward Hoy Sound and the other running N toward Brough of Birsay. The W current causes eddies in this vicinity.

Between Hoy Sound and the Bay of Skaill, the current runs continuously S, and almost continuously N from Bay of Skaill to Brough of Birsay. The velocity of the current between the entrance to Hoy Sound and Marwick Head probably does not exceed 1 knot at springs, but the velocity increases on approaching Brough of Birsay.

The E current from Brough of Birsay sets along the shore toward Costa Head and Sacquoy Head. Its rate, which is about 2 knots off Brough of Birsay at springs, increases toward Sacquoy Head. The currents setting out of Eynhallow Sound and Westray Firth may be felt for a considerable distance to seaward.

The NW current from Eynhallow Sound runs in a W direction along the coast from Costa Head to Brough of Birsay, but runs in a NE direction along the coast of Rousay, between

PAPA WESTRAY FROM SW

Quoynalonga Ness and Sacquoy Head. The currents setting out of Eynhallow Sound and Westray Firth sometimes produce tide rips and overfalls when they meet the Atlantic swell, and a dangerous sea results during gales.

The E current divides at Noup Head, one part continuing in a SE direction into Westray Firth and the other setting E and NE along the N side of Westray.

Caution.—Vessels should avoid the bight lying between Noup Head and Bow Head and keep well N of the latter point. The sea often breaks heavily in depths of 20m along this stretch of the coast.

Papa Sound and North Sound

14.6 Papa Sound separates the NE part of Westray from Papa Westray. From the N, the passage is entered between Bow Head and Mull Head, the N extremity of Papa Westray. There is a least depth of only 3.9m in the fairway and the passage is often hazardous as tide rips occur in the N part of the sound.

The W shore of Papa Sound lies between Bow Head, at the N end, and Ouse Ness, 2 miles S.

Bay of Skaill (59˚21'N., 2˚57'W.) is entered between Aiker Ness, a point located 0.5 mile SE of Bow Head, and Vere Ness, 0.8 mile SSW. It is shallow and encumbered by reefs. The Ouse, a shallow lagoon, extends W from the SW end of the bay.

Holm of Aikerness (59˚21'N., 2˚56'W.), a group of three islets, lies on a drying reef. The two N islets are covered with grass and the S islet is bare and sandy. A cairn stands on the N most islet and a rock, with a depth of less than 1.8m, lies 0.2 mile N of it.

Caution.—Submarine cables cross the sound between the Bay of Skaill and Backaskaill.

Passage through the sound should only be attempted by small vessels with local knowledge.

14.7 The E shore of Papa Sound lies between Mull Head and Vest Ness.

Mull Head (59˚23'N., 2˚53'W.), the E entrance point of the N end of Papa Sound and the N end of Papa Westray, is about 12m high and fringed with drying rocks. Depths of less than 9m lie up to about 0.3 mile offshore NE of the point.

The Bore, a dangerous tide rip, occurs off Mull Head during the W tidal current. At times the sea breaks in depths of 35m. However, vessels may safely pass within 0.5 mile of the headland in fine weather. Small vessels, familiar with local conditions, can, by keeping close inshore, follow a narrow passage of comparatively smooth water, even when The Bore is occurring. During the E tidal current with contrary winds, a heavy tide rip extends W and N of Mull Head.

The Rost, another dangerous tide rip, occurs about midway between Bow Head and the W coast of Papa Westray.

Backaskaill (59˚23'N., 2˚55'W.), a village, stands on the W side of Papa Westray and has a landing for boats. Between Mull Head and this village, the E coast of Papa Sound is fringed with rocks and shoals for up to 0.2 mile offshore.

Skerry of Backaskaill, a drying stony bank, extends 0.2 mile W from the village. Depths of less than 5m extend across the sound from this bank to Aiker Ness.

Anchorage is available in a depth of 14.6m about 1 mile SSW of the village of Backaskaill.

14.8 Vest Ness (59˚20'N., 2˚54'W.), the S point of Papa Westray and the E entrance point of the S end of Papa Sound, is low and rocky. Depths of less than 5m extend up to 0.3 mile S of the point.

Tides—Currents.—From Noup Head, the NE current runs at a comparatively slow rate and joins the main SE current from the Atlantic at Bow Head. This combined current runs rapidly over The Bow, after which part of it runs through Papa Sound. The remainder of the current continues toward Papa Westray. Between Papa Westray and Holm of Aikerness, where there are eddies and overfalls, the current has a velocity of 2 to 3 knots at springs, but it is weak elsewhere in Papa Sound. The N current setting out of Papa Sound joins the NW current flowing from Mull Head, and little or no W current is felt along the coast between Bow Head and Noup Head.

The part of the SE current that runs from The Bow toward Papa Westray divides off that island. Part of it joins the S current setting through Papa Sound and the other part runs N along the W coast of Papa Westray and joins the main SE current off Mull Head. The current flowing off the N part of the W coast of Papa Westray runs almost continuously in a N direction. The currents flow around Mull Head at a velocity of 6 knots at springs.

North Sound and Adjacent Sounds

14.9 North Sound is entered between Mull Head and Bur Ness, the N extremity of a peninsula that projects N from Sanday. Bur Ness is located 11 miles ESE of Mull Head. The W shores of the sound are formed by the E coast of Papa Westray and the SE coast of Westray. The SE shore of the sound is formed by the W coast of Sanday. The N entrances to the Sound of Faray, Calf Sound, and Lashay Sound lie on the S side of the sound. North Sound has general depths of up to 45m and the bottom consists principally of sand.

The E shore of Papa Westray between Mull Head and Head of Moclett, 3 miles S, forms the NW side of North Sound.

Holm of Papa (59˚21'N., 2˚52'W.), a small and green islet, lies about midway between Mull Head and Head of Papa. A cairn, which serves as a daymark, stands on the summit of this islet and surmounts the remains of a large mound.

South Wick, close W of the islet, affords anchorage to local small craft.

Teistie Taing, a drying reef, extends 0.1 mile SE from the islet and foul ground extends 0.2 mile seaward from it. A detached shoal, with a depth of 7.3m, lies 0.5 mile SSE of the islet.

Head of Moclett (59˚19'N., 2˚53'W.), the SE point of Papa Westray, is the NNE entrance point of Pierowall Road. The Bay of Moclett lies close W of this headland. An isolated rocky patch, with a depth of 12.8m, lies 0.5 mile SE of the headland.

Pierowall Road (59˚19'N., 2˚56'W.) is entered between Head of Moclett and the Skerry of Skelwick, 1.8 mile SSE. It affords sheltered anchorage in depths of 13 to 16m, sand and weed with good holding ground. The tidal currents in this roadstead are generally slight.

Skerry of Skelwick (59˚18'N., 2˚53'W.) is the principal danger in the approach to Pierowall Road. This rock, 0.6m high, lies at the N end of a spit which extends NE from the coast. Depths of less than 10m lie up to 0.4 mile N of the rock. A passage, with only a least depth of 5.4m, leads between the rock and the coast.

The irregular S shore of the roadstead is indented by several bights which are described from E to W.

Skel Wick, lying close W of Skerry of Skelwick, is unsuitable for anchorage due to the rocky bottom.

Bay of Swartmill (59˚18'N., 2˚55'W.) lies between Spo Ness and Sneuk, a drying reef extending 0.3 mile N from the shore. With offshore winds, temporary anchorage can be taken in this bay, but the hard bottom is not a good holding ground.

Bay of Cleat (59˚18'N., 2˚56'W.) lies between Sneuk and Point of Cott, 0.8 mile NW. Shoals extend up to 0.3 mile N from the latter point.

Bay of Brough (59˚19'N., 2˚57'W.) is shallow with depths of less than 5m throughout. A drying reef extends 0.3 mile NE from Ness of Brough, the W entrance point of the bay.

Caution.—A submarine power cable, which may best be seen on the chart, lies between the Bay of Moclett and the Bay of Swartmill.

Bay of Cleat is obstructed by abandoned submarine cables and a marine farm.

14.10 Pierowall (59˚18'N., 2˚59'W.) (World Port Index No. 32410), a small village, is situated at the head of the inner harbor. Gill Point Pier, with a depth of 4.5m alongside its outer end, extends 188m SW from Gill Point. Several buildings stand on the pier and a prominent warehouse is situated near its root.

A breakwater extends SW from the shore, parallel with the pier and 72m W of it. The head of the breakwater extends SE and forms an enclosed harbor with an entrance, 30m wide.

Noltland Castle, built of red granite and in ruins, stands 0.5 mile inland, 1 mile WSW of Gill Point. This castle is easy to distinguish from the gray buildings in the vicinity.

Vessels may anchor as convenient, in depths of up to 16.5m, within Pierowall Road, W of Vest Ness. Vessels may also anchor in a depth of 7m, sand and weed with good holding ground, with the head of Gill Point Pier bearing 295˚.

The SW side of North Sound, lies between Skel Wick and Grunavi Head.

Stanger Head (59˚16'N., 2˚52'W.) is the only bluff on the E side of Westray. Rack Wick, a bay, lies close W of this point and is encumbered by rocks.

14.11 Weather Ness (59˚15'N., 2˚50'W.), the SE point of Westray, lies 1.5 miles SE of Stanger Head. The coast between is steep-to and consists of cliffs up to 46m high.

Weatherness Sound is narrow and leads between Weather Ness and the N end of Holm of Faray, an islet lying 0.3 mile S. Reefs, which extend up to 0.2 mile S from Weather Ness, reduce the navigable channel to a width of about 200m. The fairway has a depth of 9.1m. At springs, the tidal currents in the sound may attain rates of 4 knots.

Sound of Faray is entered from the N between the N end of Holm of Faray and Red Head, the N end of Eday.

Red Head (59˚15'N., 2˚45'W.), 64m high, lies 2.5 miles ENE of Holm of Faray. Several detached rocks lie close N of this point.

Red Holm (59˚14'N., 2˚48'W.), an islet, lies near the middle of the N entrance to the Sound of Faray and is 4.6m high. The

Photo courtesy of Elizabeth Courtie

CALF SOUND—S ENTRANCE

E channel, leading between Red Holm and Eday, has a depth of 10.9m. However, the width of the fairway is restricted by shoals extending from Red Holm and Eday.

Faray (Fara) (59˚13'N., 2˚49'W.), 28m high, forms the W side of the sound. This island is connected to Holm of Faray at LW by a drying bank.

Point of Scaraber (59˚12'N., 2˚49'W.), located at the S end of Faray, is the N entrance point of the S entrance to Sound of Faray. A sandy shoal, with a depth of 3.6m, lies 0.5 mile ENE of this point and obstructs the S part of the sound.

14.12 Fersness Bay (59˚12'N., 2˚47'W.) forms the S end of the Sound of Faray. It lies between Greenan Nev, on the N side, and Fers Ness, on the S. A detached shoal, with a depth of 8.7m, lies about 0.4 mile W of Greenan Nev. The shore of the bay is fringed by a shoal bank which extends up to 0.3 mile seaward.

Fers Ness (59˚12'N., 2˚49'W.) is the S entrance point of the Sound of Faray. Depths of less than 9m extend up to 0.2 mile seaward of this point.

The S entrance connects the Sound of Faray with Westray Firth. The fairway, which lies about midway between Point of Scaraber and Fers Ness, has a depth of 12.8m.

Vessels may obtain anchorage, in a depth of 7.3m, about 0.3 mile E of Fers Ness.

Tides—Currents.—In the Sound of Faray, the tidal currents turn at the same time as those in Weatherness Sound. They attain rates of about 4 knots at springs in the narrow S part of the sound, but considerably less in the N part.

CALF SOUND FROM S

14.13 Calf Sound (59˚15'N., 2˚45'W.) is entered from the N between Red Head and Grey Head, the N point of Calf of Eday. Both of these headlands are prominent and rise from the low coasts on either side. A depth of 5.8m was reported (1977) to lie in the N entrance, about 0.4 mile SE of Red Head.

The S entrance to Calf Sound leads between the S end of Calf of Eday and Greeny Brae, on Eday.

Hen and Chickens, consisting of several small rocks which are awash at LWS, extends about 150m offshore from a point located 0.3 mile N of Greeny Brae. Except for this danger, the shores of the sound are generally steep-to and free of dangers. At its narrowest point, the navigable channel is 0.1 mile wide.

Calf Sound Light (59˚14'N., 2˚46'W.), shown from Eday, indicates the fairway leading through the sound. By day, vessels should steer a mid-channel course. At night, the white sector of this light indicates the channel leading through the N entrance. Another white sector indicates the channel leading through the S entrance.

The currents in Calf Sound attain rates of 6 knots at springs. During N gales, the N tidal current sets up dangerous tide rips at the N end of the sound.

Lashy Sound is entered from the N between Grey Head, located on Calf of Eday, and Grunavi Head, located on Sanday, 2.5 miles ESE. The S entrance lies between Greeny Brae, located on Eday, and Strang Quoy, located on Sanday, 1 mile E.

Calf of Eday (59˚14'N., 2˚44'W.), 45m high, lies on the W side of Lashy Sound, close E of the N end of Eday. The E side of this island is free of off-lying dangers, except at its SE end where a reef extends 0.5 mile E. The Bow, a rocky shoal, is the outermost danger in this vicinity. It has a least depth of 1.2m and lies 0.5 mile offshore, at the E extremity of the reef. The Scroggs and Lashy Skerry, two groups of drying rocks, both lie inshore of The Bow.

Tides—Currents.—Both the N and the S tidal currents increase in strength from S to N within Eday Sound. Throughout the sound, the S tidal current is appreciably stronger than the N current. The N current from Eday Sound sets directly onto the reefs lying W of The Bow and causes tide rips within the narrows. During N gales, the tide rips are especially strong.

14.14 Eday Sound lies close S of Lashy Sound and together they connect North Sound with Stronsay Firth. The S limit of Eday Sound lies between Ve Ness and Link Ness, 2 miles E.

The W shore of the sound lies between Greeny Brae and Ve Ness, 5 miles S. Mill Bay and London Bay, two small and shallow bights, indent the generally regular shoreline that is steep-to and free of dangers. An area, about 0.5 mile wide, lies in the middle of the sound, about 1 mile NW of Ve Ness, and has depths of 10 to 16.4m.

The SW coast of Sanday between Strang Quoy and Spur Ness, 2 miles S, forms the E shore of Eday Sound. Except for an isolated sandy shoal, with a depth of 5.2m, lying 1 mile NW of Spur Ness, this stretch of the coast is free of dangers. Depths of 10m extend up to 0.5 mile offshore close N of this isolated shoal.

Holm of Spurness (59˚10'N., 2˚41'W.) lies at the S end of a shoal spit which extends 1 mile S from Spur Ness. It consists of three islets which are connected at LW.

The Kell, the channel lying close S of Spur Ness, has a least depth of 2.7m. It has an uneven bottom and is 0.3 mile wide. The strong tidal currents setting through the channel form tide rips off the entrance towards which the current is flowing.

Links Ness (59˚09'N., 2˚40'W.), 6m high, is the NW point of Stronsay and the SE entrance point of Eday Sound. Little Linga, an islet, lies on the shorebank which extends NW from this point. Depths of 9m lie up to 0.3 mile N of the islet and the channel leading S of it has a depth of only 6.4m.

Spurness Sound is entered midway between Holms of Spurness and Little Linga. This channel connects Eday Sound with Sanday Sound and has depths of 12.8 to 16.5m in the fairway which is 0.3 mile wide.

Tides—Currents.—At the N end of Eday Sound, the tidal currents attain rates of about 6 knots at springs. Farther S, the currents are weaker, and the direction of the S current is rather irregular. The N current in this position is more or less rotary, changing direction quickly when weak and slowly when strong. During the N current, a S counter-current flows along the coast of Eday, N of the Bay of Backaland. Within Spurness Sound, the rates of the tidal currents vary between 3.5 and 4.5 knots. Tide rips usually form at the W end of the sound.

14.15 The SE shore of North Sound extends 5 miles NE from Grunavi Head, the NE entrance point of Lashy Sound, to Bur Ness, located at the NW end of Sanday.

Except for Runabrake, lying in the approach, and Cuthe Bank, lying farther S, North Sound is free of off-lying dangers.

Runabrake (59˚22'N., 2˚38'W.), a rocky area, has a least depth of 5.5m. It lies on the E side of the approach to North Sound, 7.5 miles ESE of Mull Head and 3.3 miles N of the Holms of Ire. Runabrake lies directly in the track of vessels bound through North Ronaldsay Firth from Mull Head. The W side of the shoal area is steep-to and the depths increase more gradually on the E side. During bad weather, the sea breaks heavily within 0.5 mile of this shoal area. At other times, very distinct tide rips form in the vicinity.

Cuthe Bank (59˚16'N., 2˚41'W.), with a depth of 18m, lies 2 miles NE of Grey Head, the NE point of Calf of Eday, in the N approach to Lashy Sound. At times, the sea breaks heavily over this bank.

Tides—Currents.—In the N part of North Sound, the tidal current from Mull Head runs E and ESE toward North Ronaldsay and North Ronaldsay Firth. Its velocity decreases rapidly and, in a position about midway between Mull Head and Runabrake, this current sets at 1 to 1.5 knots at springs. In the vicinity of Runabrake, the velocity of the current is about 3 knots at springs. This rate is probably maintained as far as North Ronaldsay Firth. The W and WNW currents run at about the same velocities. There is little or no tidal current in North Sound within an area lying S of a line extending between Holms of Ire and Holm of Papa and lying N of the entrances to Weatherness Sound, Sound of Fara, Calf Sound, and Lashy Sound.

From Grunavi Head, the W coast of Sanday extends 3.5 miles in a general NNE direction to Whale Point. It then extends 2.8 miles W to Whitemill Point, located at the NE end of the Burness Peninsula.

Ness of Brough (59˚16'N., 2˚36'W.) projects NW from the head of the bight which indents the coast about midway between Grunavi Head and Whale Point. This peninsula divides the bight into two bays, Bay of Brough and North Bay.

Photo courtesy of George Gilmour

NORTH RONALDSAY OLD LIGHT (FOREGROUND) AND NEW LIGHT

Bow of Hermaness, a rocky shoal, has a depth of less than 1.8m and extends about 0.8 mile NW from the Ness of Brough.

Whale Point (59˚18'N., 2˚37'W.) is the NW extremity of the Burness Peninsula and Roos Wick, a shallow bay, lies close E of it.

Holms of Ire are the N most of several rocky islets, the tallest of which is 3m high, lying on a drying spit extending 0.8 mile NNW from Whale Point. The Lotheran, a group of drying rocks, lies 0.3 mile N of the islets and The Tuo, a rocky shoal, lies about 0.3 mile farther N and has a least depth of 8.2m at its outer end.

14.16 Bur Ness (59˚18'N., 2˚33'W.) is the N point of the Burness Peninsula and Whitemill Point, the NE point, is located 1 mile E of it. Between Whale Point and Bur Ness, the coast is low, rocky, and fringed with reefs.

Riv (59˚19'N., 2˚33'W.), a drying reef, extends 1 mile N from Bur Ness and is marked at its N end by a beacon. Shoals extends 0.3 mile NE from the beacon and 0.5 mile seaward from the entire length of the reef. Baa of Trevan, with a least depth of 3.7m, lies 0.5 mile NNE of the outer extremity of the reef. The NW tidal current sets directly over this shoal. The bay lying between the Riv and the Holms of Ire is dangerous due to the strength of the tidal currents.

Whitemill Bay lies between Bur Ness and Whitemill Point, the SW entrance point of North Ronaldsay Firth.

North Ronaldsay

14.17 North Ronaldsay, the N most of the Orkney Islands, lies 13 miles E of Papa Westray and 2 miles N of the N extremity of Sanday. It is 15m high and separated from the latter island by North Ronaldsay Firth. This firth extends for 3 miles and has a greatest width of 1.5 miles at its S end.

Tides—Currents.—The E current divides at a position off the W coast of North Ronaldsay, one part running S into North Ronaldsay Firth and the other part running N and E toward Seal Skerry, where it joins the main SE current. The current sets across Seal Skerry at a rate of 6 knots at springs, and dangerous tide rips often occur in this vicinity during S gales. From Seal Skerry, the current flows SE and S, and produces a counter-current off the E coast of North Ronaldsay during the last half of its period. This counter-current runs N from a few minutes after HW at Stromness until about 3 hours before the next HW at Stromness. During the S current, the outer edge of the eddy is well marked, for a distance of about 7 miles SE of Seal Skerry, by a line of tide rips and breakers, known as Dennis Rost, which are especially violent during SE gales.

Twinyess Point (Twinness Point) (59˚21'N., 2˚26'W.) is the SW point of North Ronaldsay. The W coast of the island, which is generally steep-to, trends NE for 2 miles from this point to Tor Ness.

Twinness Rocks, a detached reef, lies 0.4 mile W of the point and has a least depth of 3m. Masewell Rock, with a least depth

of 8.8m, lies 1 mile SW of Twinness Point and has depths of 11 to 14m close around it. With W winds, the sea breaks heavily over this rock during the NW tidal current.

Tor Ness (59˚23'N., 2˚26'W.) is the NW point of North Ronaldsay. Altars of Linay, a group of rocks that dry at LW springs, lies 0.3 mile N of this point and depths of less than 10m extend up to 0.3 mile N of it.

Point of Sinsoss (59˚23'N., 2˚23'W.) is the N extremity of North Ronaldsay. Between this point and Tor Ness, 1.5 miles W, the coast is indented by Linds Wick and Garsow Wick. Depths of less than 10m extend up to 0.3 mile N from the shores of these small, reef-fringed bays.

Dennis Head is located 0.5 mile SE of Point of Sinsoss and a beacon, 21m high, stands on its E extremity.

A main light (North Ronaldsay) is shown from a tower, 42m high, standing 0.4 mile NW of the beacon. A racon is situated at the light.

Seal Skerry, a rocky drying reef, extends 0.5 mile NW from Point of Sinsoss. Between Dennis Head and Point of Sinsoss, shoals fringe the coast and extend up to 0.3 mile offshore.

14.18 Brides Ness (59˚21'N., 2˚24'W.), the SE point of North Ronaldsay, is a low and shelving point. It is fronted by a shoal bank which extends 0.4 mile offshore.

Linklet Bay, lying between Dennis Head and Brides Ness, has depths of 11 to 14m over a rocky bottom. The shore is fringed by a bank which extends up to 0.3 mile seaward. This bay should only be used as a temporary anchorage during NW gales.

The S side of North Ronaldsay, from Brides Ness to Twinyess Point, and Reefdyke, an off-lying danger, are described with North Ronaldsay Firth. Masewell Rock is described with the W coast of North Ronaldsay.

North Ronaldsay Firth

14.19 North Ronaldsay Firth, the passage leading between North Ronaldsay and Sanday, is nearly 2 miles wide at its narrowest part and has general depths of 12 to 27m in the fairway.

Tides—Currents.—In North Ronaldsay Firth, the SE current sets strongly past Strom Ness, the S extremity of North Ronaldsay, and clear of Reefdyke toward Start Point. Off Start Point, tide rips form and extend 3 to 4 miles offshore. The heaviest rips occur near the land when S winds oppose the tidal current. The N and NW currents set from Start Point directly toward Reefdyke. Both of these tidal currents produce tide rips within the firth. The rips usually occur between Strom Ness and Tafts Ness during the SE current, and off Twinyess Point, during the NW current. During and after W gales, the sea may break in the firth at all the places with depths of 15 to 22m. Both the SE and the NW tidal currents set through the firth at a velocity of about 4 knots at springs.

At springs, the tidal currents in the passage set at rates of up to 4 knots, and at times the tide rips are especially strong.

Caution.—Reefdyke (59˚21'N., 2˚22'W.) encumbers the NE approach and lies on the E side of a shoal spit which extends 1 mile E from Brides Ness. This reef has depths of 3.6 to 5.4m and its E side is steep-to. During bad weather, the sea breaks over the reef. It is usually marked by tide rips in fine weather.

14.20 North side.—From Brides Ness, the S coast of the firth trends SW for 1 mile to Strom Ness then 1 mile to Twinyess Point. Shoals front this stretch of the coast and extend up to 0.3 mile offshore.

Strom Ness (59˚21'N., 2˚25'W.), the S point of the island, is fringed by a drying reef. South Bay lies between Strom Ness and Twinyess Point. A light is shown, between 1 August and 30 April, from the pier fronting Nouster Village, which stands on the NW side of the bay.

START POINT LIGHT

Temporary anchorage is available in depths up to 15m between Brides Ness and Strom Ness. This anchorage is partially clear of the tidal currents, but the bottom, which is formed of sand and rock, provides only fair holding ground. Small vessels can obtain temporary anchorage in depths up to 9m, sand, at the E side of South Bay.

14.21 South side.—The S side of the firth lies between Start Point, on the E side, and Whitemill Point, on the W. The coast is indented by, from E to W, Scuthvie Bay, Bay of Sandquoy, and Otters Wick.

Start Point (59˚17'N., 2˚22'W.) is the SE entrance point of the firth and also the E extremity of Sanday. This point, which is formed by a flat islet, lies at the E end of a drying and rocky spit projecting E from the shore.

A light is shown from a prominent tower, 23m high, standing on the islet. A conspicuous water tower is situated 1.8 miles NW of the light.

When approaching the firth from the E, vessels are cautioned not to not confuse Start Point with Dennis Ness.

Scuthvie Bay, which is foul and rocky, lies between Start Point and Tafts Ness.

Tafts Ness (59˚19'N., 2˚25'W.), a low point, is located at the NE end of Sanday and should not be approached within 0.3 mile. A rocky ledge, with depths of 18.2 to 21.9m, extends 1 mile E from this point. During bad weather, the sea breaks heavily over the ledge.

Bay of Sandquoy (59˚18'N., 2˚28'W.) lies between Crow Taing and West Ayre. A sandy beach, about 1 mile long, fronts the head of this bay.

Otters Wick (59˚17'N., 2˚32'W.) is entered between Whitemill Point and West Ayre, a low point 1.8 miles SE. From the entrance, this shallow bay extends inland for almost 3 miles.

The Skerry, formed by a group of rocks, extends E from Whitemill Point. Outer Skerry, the outermost rock, lies about 0.8 mile E of the point. This rock has a least depth of 2.1m and a buoy is moored close of it.

Whitemill Point (59˚18'N., 2˚32'W.), located at the E end of the Burness Peninsula, is the W entrance point of Otters Wick. A small and prominent knoll rises near the point.

Whitemill Skerry, a partly drying reef, extends NE from the point and depths of less than 9m lie up to 0.5 mile offshore in this vicinity. The tidal currents within Otters Wick are weak.

Caution.—Otters Wick provides indifferent shelter. The entrance has a navigable width of only 0.5 mile, and a sea sets into the bay with N and E winds. The landmarks in the vicinity of the bay are difficult to identify and frequently cannot be seen. If possible, vessels are advised to use the anchorage at Pierowall.

Orkney Islands—East Coasts

14.22 The E coasts of the Orkney Islands, including Sanday Sound, are described next. The sequence, from N to S, is from Start Point to Tres Ness; to Odness; and then to Rose Ness, including Auskerry and Copinsay; Holm Sound; Water Sound; and Grim Ness to Old Head. Old Skerries and Old Head are also described in this sector. The areas lying to the S and W of the islands are described in Sector 8.

Sanday—Northeast Coast

14.23 The NE coast of Sanday is low and many places are barely above the level of HWS tides. Several houses stand along the shore and are the only available landmarks, but they are difficult to distinguish and are frequently obscured by haze.

Tides—Currents.—The tidal currents run strongly past Start Point, and tide rips occur when S winds oppose the current. These rips extend up to about 4 miles seaward of Start Point and are strongest near the shore. When the S current is running past Start Point, a counter-current sets in a NE direction off the entrances to the Bay of Newark and the Bay of Lopness.

Lop Ness (59˚17'N., 2˚25'W.), located 10.5 miles W of Start Point, is the N entrance point of a bight which extends 4 miles S to Tres Ness. Whoevi Bay, small and shallow, lies between Start Point and Lop Ness. The coast between is fronted by reefs and shoals which extend up to 0.3 mile offshore.

Long Taing of Newark, a drying reef, lies 2 miles WSW of Lop Ness and divides the bight into two bays, Bay of Lop Ness, on the N side, and Bay of Newark, on the S. Baa Gruna, an area of rocky foul ground, encumbers the S bay and extends up to 1 mile offshore.

Tres Ness (59˚13'N., 2˚30'W.) is the S point of the low, flat peninsula which extends S from Sanday. It is also the NE entrance point of Sanday Sound.

Indifferent anchorage is available off Long Taing during offshore winds in summer. The bottom is generally rocky with occasional sandy areas. If it is necessary to anchor in this vicinity during calm weather, vessels should do so in depths up to 27m to the E of a line extending between Tres Ness and Start Point.

Sanday Sound

14.24 The E entrance to Sanday Sound lies between Tres Ness and Odness, a point located on Stronsay, 6 miles S. The W entrance is connected to Eday Sound by Spurness Sound. Several bays and smaller secondary sounds indent the irregular shore of Sanday Sound. Numerous detached rocks and shoals encumber the sound, and two small islands, Holm of Huip and Papa Stronsay, lie close off Stronsay. The tidal currents within Sanday Sound are weak.

Cata Sand, an extensive drying flat, lies close W of the Tres Ness peninsula and The Clogg, a narrow channel, leads over it. Sty Wick lies between Tres Ness and Els Ness. A rocky bottom renders this bight unfit for anchorage. An isolated shoal, with a depth of 9.1m, lies 0.8 mile offshore, S of the entrance to The Clogg.

Els Ness (59˚13'N., 2˚34'W.) projects 1 mile S and a narrow isthmus, formed by dry sand, connects it to Sanday. Fosky Reef, rocky and with depths of less than 2m, extends 0.3 mile S from this point.

Kettletoft Bay, shallow and encumbered by reefs, is entered between Els Ness and Bea Ness, 0.5 mile NW. Holm of Elsness, a rocky and reef-fringed islet, lies in the approach to this shallow bay, 0.5 mile W of Els Ness.

Kettletoft (59˚14'N., 2˚36'W.), a small village, is situated on the W side of Kettletoft Bay. A light is shown from a pier which fronts the village. The white sector of this light indicates

the channel leading into the bay. The fairway passes between Holm of Elsness and shoal, with a depth of 1.5m, lying about 0.3 mile W. The ruins of a church stand on the NE shore of the bay, about 0.5 mile NNW of the S extremity of Bea Ness.

Backaskaill Bay (59˚14'N., 2˚37'W.) lies close W of Bea Nests and depths of less than 9m extend up to 1 mile seaward of its head. With S and E winds, a heavy sea sets into this bay.

From Backaskaill Bay, the coast trends SW for 1.3 miles to Quoy Ness, a low and reef-fringed point. It then trends 1.3 miles SSW to Hacks Ness. Dennis Skerry, a detached reef, has a least depth of 0.6m and lies 0.3 mile offshore, about midway between Quoy Ness and Hacks Ness.

Bay of Stove is entered between Hacks Ness and Spur Ness. This narrow bay extends inland for 1 mile and its N half dries.

Between Backaskaill Bay and Hacks Ness, the coast is fronted by shoals which extend up to about 0.5 mile offshore.

Spur Ness (59˚11'N., 2˚41'W.) is the S extremity of Sanday.

Caution.—It was reported (1991) that a ro-ro ferry terminal is to be constructed at Loth, about 0.5 mile N of Spur Ness.

The SW side of Sanday Sound lies between Links Ness and Odness. Numerous rocks and isolated shoal areas encumber this part of the sound. Mill Bay indents the irregular coastline at the S end of the sound.

Holm of Huip (59˚10'N., 2˚39'W.), 18m high, lies 0.5 mile off the N coast of Stronsay and a cairn stands on its summit. This island is separated from Stronsay by Huip Sound, a narrow channel with a depth of only 3.1m.

Huip Ness, a flat peninsula, extends 0.8 mile SE from the N point of Stronsay. Numerous detached shoals, with depths of 3 to 9m, encumber the area lying N of Huip Ness and extend up to 1.8 miles offshore. Quiabow, a rocky shoal marked by a buoy, has a depth of 1.5m and lies in this area, about 0.5 mile E of the N point of Stronsay.

14.25 Papa Stronsay (59˚09'N., 2˚35'W.) lies off the NE side of Stronsay. This islet is 11m high and a light is shown from its NE side. A narrow, stony peninsula extends 0.3 mile W from the middle of its W side. A cairn stands on the SE point of this islet and a mound, surmounted by a pile of stones, stands at the N end. Shoals fringe the E side of the islet and extend up to 0.3 mile seaward. Papa Gruna, a shoal, extends 0.8 mile NNE from the islet and has a depth of 6.1m at its N extremity.

Papa Sound (59˚09'N., 2˚36'W.) lies between Papa Stronsay and the NE coast of Stronsay. Tidal currents in this sound are very weak.

Whitehall (59˚09'N., 2˚36'W.), a small village, stands on the S side of Papa Sound. It is fronted by a pier, which is marked by a light, and is an important fishing center. The fairway leading to the pier, which is marked by lighted buoys, has a depth of 3.5m.

It was reported (1990) that a ro-ro facility and ferry terminal were under construction in the vicinity of the village.

Mill Bay (59˚08'N., 2˚35'W.) lies between Grice Ness and Odness, 1.5 miles SE. The bay does not provide good anchorage. However, if necessary, vessels can anchor in a depth of 12m about 0.3 mile S of Grice Ness. The bottom within the bay is generally sandy and foul.

14.26 Odness (Odin Ness) (59˚07'N., 2˚32'W.) is the S entrance point of Sanday Sound. Holm of Odness, an islet, lies on the shorebank close N of this point. The Bow, a small and detached drying reef, lies 0.3 mile N of the islet.

The coast of Stronsay from Odness to Lamb Head and the mainland coast from Mull Head, located on Deerness, to Rose Ness are described below together with Auskerry and Copinsay. The area lying W of a line connecting Lamb Ness to Mull Head is described with Stronsay Firth.

Odin Bay (59˚06'N., 2˚32'W.) is entered between Odness and Burgh Head, about 2 miles S, and has high shores. The latter point is formed by sheer cliffs up to 45m high.

Lamb Head (59˚05'N., 2˚32'W.), located at the S end of the Lamb Ness peninsula, is 23m high. Between Burgh Head and Lamb Head, the coast consists of low, broken cliffs. Hells Mouth, a small bight, lies on the N side of Lamb Ness and is encumbered with rocks. Its shores are indented by numerous chasms. The breaking seas crash noisily on the rocks and flow through the chasms, with a heavy roar.

Auskerry (59˚02'N., 2˚34'W.), a grass-covered islet, lies 3 miles SSW of Lamb Head and is 18m high. A rocky shoal, with a depth of less than 2m, lies on the N edge of a reef which extends up to 0.3 mile N from the islet.

A light is shown from a prominent tower, 34m high, standing on the S point of the islet. A chapel, in ruins, is situated on the E side of the islet.

Auskerry Sound is described with Stronsay Firth.

Caution.—An obstruction was reported (1917) to lie about 0.5 mile S of Auskerry.

Auskerry should not be confused with Muckle Skerry, lying at the E end of Pentland Firth, which it closely resembles.

AUSKERRY LIGHT BEARING 094˚

14.27 Mull Head (58˚59'N., 2˚43'W.), the NE point of Deerness, lies 5.5 miles SW of Auskerry. This steep-to headland is 47m high and forms the S entrance point of the E end of Stronsay Firth. Brough of Deerness, 0.5 mile S of the point, is a cliffy peninsula which is nearly separated from the coast by a deep ravine.

Skaill Skeeries, consisting of several detached drying reefs, lies 2 miles S of Mull Head and is fringed by shoals extending up to 0.8 mile E.

Between Brough of Deerness and Skaill Skerries, the shore consists of cliffs, up to 15m high, and is fronted by a narrow reef. Between Skaill Skeeries and Point of Ayre, the coast is fringed with reefs and shoals which extend up to 0.3 mile offshore.

Point of Ayre (58˚55'N., 2˚43'W.), located 3 miles S of Mull Head, forms the SE point of Deerness.

Horse of Copinsay, a rocky islet, lies 0.5 mile NNE of North Nevi, the NE point of Copinsay, and is 18m high. The passage lying between this islet and Copinsay is foul. The islets of Ward Holm, Corn Holm, and Black Holm lie NW of Copinsay, on the shoal spit which connects the island to Deerness.

Copinsay (58˚54'N., 2˚40'W.), an island, lies at the SE extremity of a shoal spit, which extends about 2 miles SE from Point of Ayre, and is 64m high. A light is shown from a prominent tower, 16m high, standing on the summit of this island.

Photo courtesy of Scottish Radiance
COPINSAY LIGHT

To the W of Point of Ayre, the S coast of Deerness is indented by Newark Bay, which is shallow and foul. A narrow isthmus connects the SW point of Deerness to the island of Mainland. In bad weather, the sea breaks over this narrow strip of land. The SE coast of Mainland is bordered by cliffs, 15 to 30m high, and fringed by reefs and shoals.

Rose Ness (58˚52'N., 2˚50'W.), the SE point of Mainland, is also the N entrance point of the E entrance to Holm Sound. A light is shown from this point and a beacon stands on the cliffs, close NE of the light structure. Ward of Palpay, a prominent hill, stands 1.5 miles N of the point and is 87m high.

Holm Sound—Water Sound

14.28 Holm Sound and Water Sound, which at one time led into Scapa Flow, are now blocked by breakwaters. They are approached from the E between Point of Ayre, the SE point of Deerness, and the SE point of South Ronaldsay, about 13 miles SSW.

Only the E parts of Holm Sound and Water Sound, which are located E of the breakwaters, are described below. The W parts of the sounds, which lie W of the breakwaters, are described with the E part of Scapa Flow.

The island of Burray lies between the SE coast of Mainland and the N coast of South Ronaldsay. It divides the passage leading into Holm Sound into two parts. A conspicuous beacon surmounts the summit which is 78m high and rises at the W end of the island.

Two islets, Lamb Holm, on the N side, and Glims Holm, on the S, divide Holm Sound into three smaller sounds. Kirk Sound leads N of Lamb Holm, Skerry Sound leads between the islets, and East Weddel Sound leads S of Glims Holm.

Tides—Currents.—Since Holm Sound and Water Sound were closed by breakwaters, sufficient observations have not been obtained to determine the direction and rate of the tidal currents in the E parts of these sounds. It is probable that there is no regular tidal current.

14.29 Holm Sound is entered between Rose Ness and Burray Ness, the E point of Burray, 1.5 miles SW. The entrance has depths of 16 to 24m.

A breakwater extends completely across Kirk Sound, between the NW point of Lamb Holm and the mainland.

Skerry Sound is completely blocked by a breakwater which extends between Kirk Point and the NE end of Glims Holm.

East Weddel Sound is also blocked by a breakwater which extends between Ward Point and the SE point of Glims Holm.

During offshore winds, small vessels can anchor in the bight lying between Burray Ness and Burray Haas. The holding ground is good and the tidal currents are negligible. However, a heavy sea is quickly formed at this anchorage with E winds. When the wind opposes the tidal current, heavy seas extend into the sound as far as Lamb Holm. Vessels should not attempt to enter Holm Sound when strong S winds oppose the S tidal current.

Water Sound lies between Burray Ness and Grim Ness, the NE point of South Ronaldsay, 2 miles SW. A breakwater extending between Ayre of Cara, on South Ronaldsay, and Burray, to the N, completely blocks this sound. The larger part of Water Sound lies W of the breakwater and the E section is of little importance to shipping.

Caution.—The remains of blockships are reported to extend into Water Sound and up to 0.2 mile from the breakwater.

Submarine oil pipelines, which may best be seen on the chart, lie within Water Sound and connect the North Sea oil fields with Flotta Run.

14.30 From Grim Ness, the E coast of South Ronaldsay extends 5 miles S to Old Head.

Grim Ness (58˚49'N., 2˚52'W.), a prominent headland, projects E from the NE corner of South Ronaldsay and is 33m high. With W winds, vessels may anchor as convenient in

depths of 16 to 18m, about 0.5 mile offshore, between Grim Ness and Bigore Head. However, this section of the coast is open to the S and E. Wind Wick affords anchorage in W winds, but strong E winds cause a heavy sea in this bay.

Bay of Lime, entered between Grim Ness and Kirk Ness, is shallow and fringed by a narrow reef. Manse Bay, lying in the S part of Bay of Lime, is formed by an indentation in the reef.

Kirk Ness (58˚48'N., 2˚54'W.), a low and flat point, is fronted by foul ground extending up to 0.3 mile seaward. A prominent church stands close inland of Kirkhouse Point which is located 0.3 mile SW of Kirk Ness and fronted by rocky shoals on its SE side.

Newark Bay lies between Kirkhouse Point and Stews Taing. The N part of this shallow bay is known as the Pool of Cletts. Bigore Head is located 0.3 mile S of Stews Taing. The coast between this point and Hesta Head is indented by several shallow bights and is backed by cliffs, 60 to 71m high. Wind Bay lies between Hesta Head and Halcro Head, 1.5 miles SSE.

14.31 Halcro Head (58˚45'N., 2˚54'W.), a bold headland, consists of prominent sheer cliffs. Between this headland and Old Head, the shore is rather irregular and is backed by cliffs, 30 to 36m high. Ham Geo, a narrow inlet, lies 0.3 mile N of Old Head, but a detached above-water rock obstructs its entrance.

Old Head (58˚44'N., 2˚55'W.), the SE point of South Ronaldsay, is only about 18m high and not prominent from seaward. Old Skerries, a rocky reef, extends 0.3 mile E from this headland.

The areas lying S and W of Old Head are described in Sector 8 along with the N side of Pentland Firth.

Tides—Currents.—Off the E entrance to Stronsay Firth and at a position about 5 miles E of Mull Head, the currents are of a rotary nature and their velocities are somewhat irregular, varying between 0.8 knot and 1.5 knots.

Between Mull Head and Point of Ayre, a counter-current sets in a N direction during the SE current. With S gales, tide rips occur off Mull Head during the SE current.

In Pass, the tidal currents have a maximum velocity of 3 knots at springs and cause tide rips in the shallow parts of the passage, especially when the wind opposes the current. Under these latter circumstances, the sea may break heavily across the entire width of the passage. It is believed that the currents setting through Copinsay Pass do not set directly through the passage. The NE current is believed to set toward the N side of the channel and the SW current toward the S side.

Before the closing of Holm Sound and Water Sound, the current flowing between Copinsay Pass and Halcro Head was greatly affected by the strong currents running in and out of these sounds. With the blocking of the sounds this effect has ceased and little is known of the currents off this part of the coast.

The strong current running in an E direction out of Pentland Firth causes tide rips between Halcro Head and Old Head. It is believed that these rips may extend along the coast as far N as Grim Ness.

Orkney Islands—Westray Firth—Stronsay Firth

14.32 The N side of Westray Firth is described first, then the S side. The sequence is from W to E. For Stronsay Firth, the descriptive sequence is from E to W, first the N side and then the S.

Aspect.—Westray Firth and Stronsay Firth, which together form the widest channel through the Orkney Islands, lie between the islands of Westray, Eday, and Stronsay, on the NE side, and the islands of Rousay, Egilsay, Shapinsay, Mainland, and Deerness, on the SW side. The combined length of these firths is about 20 miles and there are general depths in the fairways of 31 to 36m.

With the exception of two islets, which lie near the junction point of the firths, and several detached reefs and shoals, which lie in the N part of the W end of Westray Firth, this waterway channel is comparatively free of off-lying dangers. However, considerable caution is necessary for navigating these firths because of the rapidity of the tidal currents and the dangerous tide rips that may be encountered under certain conditions.

On its NE side, the channel leading through Westray Firth and Stronsay Firth is connected to the North Sound by the Sound of Faray and Eday Sound, which were previously described within this sector. On its SW side, the channel is connected to the approaches to the town of Kirkwall by Shapinsay Sound and by several smaller sounds.

Numerous bays indent the irregular coasts of the islands that border the sides of these firths. Westray Firth and Stronsay Firth join each other in an area lying between War Ness, the S extremity of Eday, and a point, known as The Graand, which is the S extremity of Egilsay.

Westray Firth

14.33 Tides—Currents.—The E current setting from the Atlantic Ocean flows directly into Westray Firth, past Sacquoy Head, and into Saviskaill Bay, where it is very weak. The S current setting from Noup Head also flows into the firth. It flows very strongly across Skea Skerries and then weakly past the Bay of Tuquoy and toward Wart Holm. Between Sacquoy Head and Berst Ness, the current begins to flow into the firth at about 3 hours 45 minutes before HW at Stromness. Because of the two directions from which it sets, this current is rotary in character. At the beginning, the current flows in an E direction, but it changes slowly to run in an ESE direction near the time of HW at Stromness. At this latter time, the current attains its greatest velocity of 3 knots at springs. After HW at Stromness, the current changes direction more rapidly from E to ESE until about 2 hours after HW at Stromness, when the current ends.

In the S part of the firth, near Faraclett Head, the E current begins about 5 hours 30 minutes before HW at Stromness and attains a velocity of about 3 knots at springs.

In the N part of the firth, off Wart Holm, the SE current begins about 2 hours 30 minutes before HW at Stromness and attains a velocity of about 5 knots at springs. Eddies may be encountered in this general vicinity for up to about 1 hour before the current turns.

The united currents flow into the SE part of Westray Firth with great velocity. In a position about midway between Kili Holm and Fers Ness, the SE current begins about 3 hours 20

minutes before HW at Stromness and attains a velocity of 4.8 knots at springs. Between Muckle Green Holm and War Ness, the current starts about the same time and attains a velocity of 7.3 knots at springs. In a position about midway between Muckle Green Holm and Egilsay, the current starts a few minutes later and attains a velocity of about 5 knots at springs.

During the strongest part of the current, a N setting counter-current flows along the E side of Egilsay. At this time, an area of slack water or eddies is also formed. This area usually extends up to 1 mile in a S direction from Muckle Green Holm.

Recent observations, although not obtained in any detail, have shown that the S current in Rousay Sound begins about 4 hours before HW at Stromness and the N current about 2 hours after HW at Stromness. In the narrow and obstructed N part, the currents appeared to attain a velocity of 5 to 6 knots at springs, but were probably weak elsewhere within the sound.

In Fall of Warness, the channel lying between War Ness and Muckle Green Holm, the NW current begins about 2 hours 15 minutes after HW at Stromness and attains a velocity of 6.8 knots at springs. About midway between Muckle Green Holm and Egilsay, this current begins about the same time and attains a velocity of 5.8 knots at springs. In a position lying 1.5 miles NE of Kili Holm, it begins about 2 hours 30 minutes after HW at Stromness and attains a velocity of about 5 knots at springs.

As the SE end of the firth is approached, the NW current begins earlier on the SW side than on the NE side. Off Faraclett Head, the NW current begins nearly 2 hours after HW at Stromness and attains a velocity of 3 knots at springs. Off Wart Holm, this current begins about 1 hour later and attains a rate of about 4.5 knots at springs. From the vicinity of Wart Head, the current runs in a NW direction across Skea Skerries and then along the W coast of Westray.

Rull Rost, a tide rip, occurs near the middle of Westray Firth, about midway between Faraclett Head and Wart Holm, and is the most dangerous in this locality. Recent observations have shown that this rip may extend up to 2 miles SE from the above position during the strength of both the NW and SE currents. However, no rips were observed at the sides of the firth. It is probable that the extent of Rull Rost depends greatly on weather conditions. During the NW current and with W and NW gales, this rip may extend completely across the firth. However, it appears to only form in the middle of the firth during good weather.

14.34 Westray Firth is entered from the W between Sacquoy Head, the NW point of Rousay, and Inga Ness, located at the W side of Westray. The entrance is about 5 miles wide.

Inga Ness (59˚17'N., 3˚01'W.) is the NW entrance point of Westray Firth. Fitty Hill, 167m high, rises 0.8 mile NE of this point.

Berst Ness (59˚16'N., 2˚59'W.), a low point, is located 1.5 miles SE of Inga Ness and appears as an island from the W. Bakie Skerry, an above-water rock, lies close S of this point.

Skea Skerries, consisting of a group of drying rocks, lies 1 mile offshore. These rocks are located at the outer end of a rocky spit, which extends S from Berst Ness, and the sea breaks heavily over them whenever there is any swell. A shoal, with a least depth of 4m, lies 0.5 mile SW of the group.

Between Berst Ness and Point of Huro, 3.5 miles SE, the shore recedes to form an irregular bight. Bay of Tuquoy is entered between Ness of Tuquoy and Twin Ness. This shallow bay occupies the head of the bight.

Skerry of Wastbist, a drying rock, lies 0.5 mile W of Twin Ness and Swine Skerry, a rocky shoal, lies 0.5 mile S of the same point and has a depth of less than 2m.

Point of Huro (59˚14'N., 2˚53'W.), the S point of Westray, is formed by the S extremity of a peninsula. Several groups of rocks and islets lie on the shoal spit which extends SW from the point. Wart Holm, a green islet, lies 0.5 mile offshore and is the outermost danger in this vicinity.

14.35 Rapness Sound (59˚14'N., 2˚51'W.) is entered between Point of Huro and Point of Scaraber, the S extremity of Faray. The peninsula, of which the former point is the S extremity, forms the W shore of the sound. Holm of Faray and Faray form the E shore. The N part of this sound is connected to the North Sound by Weatherness Sound, and the middle of its E side is connected to the Sound of Faray by Lavey Sound. There are general depths of less than 9m, over an irregular bottom, in the N and NE parts of Rapness Sound.

Rusk Holm (59˚12'N., 2˚51'W.), a flat island, lies near the middle of the S approach. Rocky shoals, with depths of less than 9m, extend up to 1 mile N and 0.5 mile S of this island.

The W coast of Faray is free of off-lying dangers and the channel leading between it and Rusk Holm has a least depth of 9m. However, vessels are recommended to use the fairway passing W of Rusk Holm when entering Rapness Sound.

Harp Skerry, a rocky and shallow shoal, lies at the outer edge of the shorebank which extends about 0.3 mile SW from Scaraber Point.

On the W side of Rapness Sound, the coast is fronted by shoals, which extend up to 0.3 mile offshore. Several isolated depths of less than 9m also lie up to 0.5 mile offshore in this vicinity.

Fers Ness (59˚12'N., 2˚49'W.), the N point of the W side of Eday, lies 0.5 mile S of Point of Scaraber. This point is also the S entrance point of the S entrance to Sound of Faray.

Except for Seal Skerry, the W coast of Eday between Fers Ness and War Ness is generally steep-to and free of dangers.

Seal Skerry (59˚10'N., 2˚49'W.) projects 0.5 mile S from the Fers Ness. Seal Skerry Bay, a shallow inlet, lies immediately E of the drying reef.

14.36 War Ness (59˚08'N., 2˚47'W.), the S point of Eday, lies 3.5 miles SSE of Fers Ness. Warness Skerry, a group of drying rocks, extends 0.1 mile S from the point. The tidal currents flow over these rocks, with great velocity, and, when S gales oppose the current, the resulting strong tide rips extend up to about 0.8 mile S from War Ness.

The S entrance to Westray Firth is obstructed by several islets, which lie near mid-channel at the junction of Westray and Stronsay Firths.

Muckle Green Holm (59˚08'N., 2˚50'W.) lies 1.3 miles WSW of War Ness. A smaller islet, Little Green Holm, lies close S of it. Reefs and shoals fringe the islets up to about 0.3 mile seaward. The passage lying between the islets and War Ness is known as the Fall of Warness.

Caution.—A submarine cable, which may best be seen on the chart, lies across Westray Firth in the vicinity of Point of Huro.

14.37 The N coast of Rousay and the N and E coasts of Egilsay form the S side of Westray Firth.

Sacquoy Head (59˚12'N., 3˚05'W.), the NW point of Rousay, is a low reef-fringed point.

Rullard Rost, the tide rip that occurs off Sacquoy Head, is believed to form during and after W gales. It is probable that it occurs only during the time, when the current running out of Eynhallow Sound, which runs in a NE direction along the W coast of Rousay, meets the W current from Westray Firth.

Saviskaill Bay (59˚11'N., 3˚01'W.) lies between Saviskaill Head, located 0.8 mile E of Sacquoy Head, and Faraclett Head, 2.3 miles ESE. This bay, although deep and free of dangers, affords poor anchorage due to the rocky nature of the bottom.

Faraclett Head (59˚11'N., 2˚58'W.) is the NE point of Rousay. Scock Ness, a square-shaped peninsula, projects from the coast close SE of this headland.

Egilsay (59˚09'N., 2˚55'W.), a low island, lies about 1 mile E of the E coast of Rousay. A drying reef connects Kili Holm and Egilsay. The former islet lies on the shorebank extending N from Egilsay. Depths of less than 10m lie up to 0.8 mile off the N coast of the island and up to 0.3 mile off the E coast, between Point of Crook and The Graand.

The Graand (59˚08'N., 2˚55'W.) is the S point of Egilsay. A drying reef, Point of The Graand Reef, extends 0.2 mile S from the point. Depths of less than 10m lie up to almost 1 mile S of The Graand and a buoy marks the S limit of the shoalbank in this vicinity.

Benlin Rock (59˚07'N., 2˚52'W.), an isolated rocky depth of 8.8m, lies near mid-channel in the approach to the passage which leads N between Muckle Green Holm and Egilsay. Another detached depth of 7.9m obstructs the passage about 1 mile NE of The Graand.

Rousay Sound (59˚09'N., 2˚57'W.), the passage lying between the E side of Rousay and the W side of Egilsay, is entered from the N between Scock Ness and the N point of Egilsay. From the S, the fairway leads between The Graand and the island of Wyre.

14.38 Holm of Scockness (59˚10'N., 2˚56'W.), a green islet, is 17m high and divides the N entrance into two passages. Sound of Longataing lies on the W side of the islet and Howe Sound lie on the E. Vessels, with drafts up to 4.5m, can pass through Sound of Longataing, which is only 0.1 mile wide in places. Vessels using Howe Sound are limited to a draft of 3.3m. These passages should not be attempted without local knowledge.

A detached 5.5m depth lies in the S entrance to Rousay Sound, about 0.5 mile SE of Point of the Wart, the NE point of Wyre.

The E entrance to Wyre Sound lies between Point of the Wart and Point of Aveishay, which is located at the SE end of Rousay 0.5 mile NNW.

A light is shown occasionally from the pier situated in the village of Skaill, on the W side of Egilsay.

Rousay Sound affords the most protected anchorage in the vicinity of Westray Firth. Vessels awaiting a tide can find passable anchorage in Rapness Sound. The holding ground is good, but the exposed roadstead is open to S and W winds.

Caution.—Submarine cables, which may best be seen on the chart, lie across the S part of Rousay Sound, from Point of Avelshay to the vicinity of Skaill on Egilsay. Beacons mark the cable landings.

Stronsay Firth

14.39 The E entrance to Stronsay Firth lies between Lamb Head, the SE extremity of Stronsay, and Mull Head, the N extremity of Deerness. The island of Auskerry lies in the N part of the entrance, 2.5 miles SSW of Lamb Head. The width of the firth varies, from about 8 miles at its E entrance, to about 3 miles near its junction with Westry Firth. With the exception of Baas of Linton, a 9.8m shoal lying 1.3 miles off the middle of the E coast of Shapinsay, the firth is comparatively free of off-lying dangers. However, there are several such dangers in the approaches to Eday Sound and St. Catherine Bay, which are located in the N part of the firth. Stronsay Firth is characterized by the great differences in its navigable condition. During periods of calm, even boats can cross the firth in safety, but with S winds and an opposing tidal current, heavy and hazardous tide rips can occur in places.

Tides—Currents.—In general, the tidal currents run regularly and strongly in mid-channel through Stronsay Firth, although there are counter-currents along its SW side. Tide rips form off Mull Head during the SE current. These are especially strong during S and SE gales.

In the E entrance to the firth, the tidal currents have a velocity of about 4 knots at springs, in both directions.

There have been no recent observations of tidal currents in Auskerry Sound, but older information disclosed that the velocity of the current in the sound was between 3 and 4 knots.

During the SE current, tide rips occur in Fall of Warness, the channel lying between War Ness and Muckle Green Holm. During S gales, this channel may become unnavigable. At such times the entire area lying between War Ness and Ness of Ork may be affected by heavily breaking seas.

There is very little tidal current in Linga Sound, St. Catherine Bay, Bay of Holland, and Veantrow Bay.

14.40 The S coast of Stronsay from Lamb Head to Rothiesholm Head and the S approach to Eday Sound comprise the N side of Stronsay Firth.

Lamb Head (59˚05'N., 2˚32'W.), the SE point of Stronsay, is the NE entrance point of Stronsay Firth. Between Lamb Head and Tor Ness, 2 miles W, the coast recedes to form a bight. Ward of Houseby, a point located about midway between Lamb Head and Tor Ness, divides this bight into two shallow bays. Bay of Houseby lies E of the point and Ingale Sound lies W of it. North of a line extending between Lamb Head and Tor Ness, the general depths are less than 5m and depths of less than 1.8m extend up to 1 mile offshore in places. Ingale Skerry, a drying reef, lies on the S edge of the rocky shoal which extends S from Lanb Head.

Auskerry Sound (59˚03'N., 2˚35'W.), the passage lying between Stronsay and Auskerry, has depths of 15 to 34m. The fairway leads between the reefs and has a width of almost 0.5 mile. The sea often breaks on a shoal that lies close off the N side of Auskerry and when the tidal current opposes the wind, a heavy sea forms in the passage.

Tor Ness (59˚04'N., 2˚36'W.), a low and reef-fringed cape, is the S point of Stronsay and also the E entrance point of the Bay

ROTHIESHOLM

of Holland. This latter bay, which extends inland for about 2 miles, is entered between the cape and Greenli Ness, 1.3 miles W.

Rothiesholm Head (59˚04'N., 2˚41'W.), located at the SW end of the Rothiesholm peninsula, is the SW point of Stronsay. The S coast of the peninsula is generally cliffy, and with the exception of Dowie Sand, is free of dangers up to about 0.3 mile offshore.

Dowie Sand (59˚04'N., 2˚38'W.), a rocky depth of less than 8m, lies about 0.8 mile SSW of Greenli Ness. In fine weather, this rocky patch is generally marked by tide rips, but when the tidal current opposes the S wind, a heavy sea occurs in the vicinity.

The entrance fairway, at the E end of Stronsay Firth, is 5 miles wide and leads between Mull Head and Auskerry.

14.41 Deer Sound (58˚58'N., 2˚45'W.) is entered between Mull Head and Rerwick Head, 3 miles NW. This sound lies between the NW and W coasts of Deerness and the N part of the E coast of Mainland.

The outer part of the sound is deep and free of off-lying dangers. This part of the sound lies between a line extending from Mull Head to Rerwick Head and a line extending from Northquoy Point to The Ness, 0.8 mile NW. The inner part of the sound, which lies S of the line extending from Northquoy Point to The Ness, is shallow and of no importance to shipping. The head of the sound is formed by the narrow isthmus, which connects Deerness with Mainland.

Between The Ness and Rerwick Head, the coast is rather steep-to and formed by cliffs, up to 15m high.

Rerwick Head (59˚00'N., 2˚48'W.), a low headland, forms the W entrance point of Deer Sound and the S entrance point of the E end of Shapinsay Sound. Rerwick Point, a drying reef, extends 0.2 mile NW from this headland. Scarf Skerry lies on the E side of the reef and foul ground extends up to 0.1 mile N and NW of it.

Hackness (59˚01'N., 2˚49'W.), the S extremity of Shapinsay, lies nearly 2 miles NNW of Rerwick Head and forms the N entrance point of the E end of Shapinsay Sound. This low point is fronted by reefs and shoals which extend up to 0.1 mile offshore.

From Hackness, the E coast of Shapinsay extends in a general N direction for 4 miles to Ness of Ork, the NE point of the island.

Baas of Linton (59˚03'N., 2˚46'W.) is the only off-lying danger. This steep-to shoal has a least depth of 9.8m and lies 1.3 miles offshore, about midway between Hackness and Ness of Ork.

Ness of Ork (59˚05'N., 2˚48'W.) is a low and rocky point. A detached shoal, with a depth of 7.3m, lies 0.5 mile NW of this point and several other depths of less than 8m lie between it and the shore.

Veantrow Bay (Vantrow Bay) (59˚04'N., 2˚52'W.) is entered between Holm Taing, located about 1.5 miles SW of Ness of Ork, and The Galt, the NW point of Shapinsay. Depths of less than 9m extend up to 1 mile seaward from the shores of the bay.

The Galt (59˚05'N., 2˚54'W.), the low extremity of a narrow peninsula, is the SE entrance point of Wide Firth. A beacon stands 0.5 mile S of the point.

Depths of less than 10m extend up to almost 0.8 mile N from this point. Galt Skerry, a drying reef, lies close NE of point. Two 8.4m rock patches lie close together, 0.5 mile N of the point, and are marked close N by a lighted buoy.

Sweyn Holm (59˚06'N., 2˚57'W.), an islet, forms the NW entrance point of Wide Firth. This islet, which is 15m high, also forms the S entrance point of Gairsay Sound.

14.42 The S approach to Eday Sound lies within a line extending NW from Rothiesholm Head, on Stonsay, to Way Ness, the SW point of Eday. Two isolated shoal areas lie in the approach and divide the fairway into E and W channels.

South Skerry (59˚07'N., 2˚43'W.), the southernmost shoal area, has a least depth of 4.3m.

Eday Gruna (59˚08'N., 2˚43'W.), the N area, has a least depth of 4m and is marked by a lighted buoy, moored close N.

The passage leading between these two shoal areas is 0.3 mile wide and has depths of 11 to 12.8m.

On the E side of the approach, the irregular shoreline curves E to form a shallow bight, known as St. Catherines Bay. Linga Holm, an islet, and Swarf, a drying reef, lie in the entrance to this bight.

Orkney Islands

14.43 The descriptive sequence is from Eynhallow Sound to Shapinsay Sound, The String, and then to Wide Firth. The smaller bays and sounds are described with their adjacent water areas.

Kirkwall (58˚59'N., 2˚57'W.), the capital and principle city of the Orkney Islands, is situated near the middle of the NE coast of Mainland. It lies at the head of Bay of Kirkwall, which, in turn, lies at the S end of Wide Firth. This latter body of water is bounded by the NE side of Mainland, the W side of Shapinsay, and the S side of Gairsay. Wide Firth can be entered from the W by way of Eynhallow Sound, which is a comparatively narrow channel leading between the N side of Mainland and the islands of Rousay, Wyre, and Gairsay. It can be entered from the E and the N via Stronsay Firth. The E entrance, which can be used by deep-draft vessels, is approached through Shapinsay Sound. This latter sound is connected to Stronsay Firth at a place lying between Rerwick Head, on Mainland, and Hacks Ness, on Shapinsay. The N entrance, which lies between the W side of Shapinsay and the E side of Gairsay, is encumbered by islets, reefs, and shoals. It can only be used by vessels with drafts of less than 4.9m and having local knowledge.

Tides—Currents.—In the W entrance to Eynhallow Sound, between Costa Head and Quoynalonga Ness, the SE current attains a probable velocity of 2 to 3 knots at springs. The current divides in a position NW of Eynhallow and flows through the narrow and obstructed channels, lying NE and SW of the island, at a velocity of about 7 knots at springs. Tide rips occur in these channels when the current is strong, and, during these times, an area of eddies or slack water extends up to about 1 mile in a SE direction from the island.

The two branches of the current join each other at a position SE of Eynhallow and continue to flow through Eynhallow Sound at a considerably lower velocity. After the current passes Aiker Ness, it is probable that weak currents branch off into Wyre Sound and Gairsay Sound, but the main part continues in a SE direction through the channel leading between Gairsay and Mainland. The SE current attains a velocity of about 3.5 knots at springs. The NW current in Eynhallow Sound, between Gairsay and Mainland, attains a velocity of about 3.5 knots at springs. Off Aiker Ness, it attains a velocity of about 2.5 knots at springs.

After the NW current passes Aiker Ness, it divides in a position SE of Eynhallow and flows through the channels leading NE and SW of that island. This current attains a velocity up to 7 knots at springs. Tide rips occur in the channels when the current is strong, and, at these times, an area of eddies or slack water extends up to about 1 mile in a NW direction from the island.

In the W entrance of Eynhallow Sound, between Costa Head and Quoynalonga Ness, the NW current probably attains a velocity of 2 to 3 knots at springs.

In Gairsay Sound, recent observations have shown that the tidal currents are weak and irregular. The velocities of these currents do not exceed 1.5 knots at springs. However, vessels passing through this sound should expect a fairly strong set, either N or S, at any time. Although no recent observations have been made in Wyre Sound, it is believed that the tidal currents are quite similar to those within Gairsay Sound.

14.44 Eynhallow Sound (59˚09'N., 3˚07'W.) has its W entrance lying between Costa Head, the N extremity of Mainland, and Quoynalonga Ness, the W extremity of Rousay. The sound trends in a general SE direction for 70 miles and connects with the NW part of Wide Firth. Vessels with drafts up to 7.3m can, with local knowledge, proceed through Eynhallow Sound. However, it is recommended that vessels with drafts over 4.9m use the E approach to Kirkwall, via Stronsay Firth and Shapinsay Sound.

Costa Head (59˚09'N., 3˚12'W.) is the SW entrance point of Eynhallow Sound. It is conspicuous, 122m high, and faced with cliffs.

Quoynalonga Ness (59˚10'N., 3˚07'W.), the NE entrance point of Eynhallow Sound, is described with Rousay Island in paragraph 14.4.

Eynhallow (59˚09'N., 3˚07'W.) lies in mid-passage, nearly 2 miles within the entrance of the sound. This islet is 30m high and except for the W side, which is steep-to, is fronted by reefs and shoals.

Weal Race leads between Eynhallow and Rousay. A small drying reef lies in this channel, nearly 0.3 mile NE of the NE point of Eynhallow. Depths of less than 2m extend up to 0.5 mile N of this reef and reduce the fairway to a width of less than 0.1 mile. Due to the narrowness and the strength of the tidal currents, this channel is considered hazardous and should be avoided.

Eynhallow Skerries, a group of small drying reefs, lies near the S end of a shoal, which extends 0.8 mile SE from Eynhallow.

Burgar Rost leads between Eynhallow and Mainland. A bar, with a depth of 8.2m, extends from Eynhallow to the shorebank fronting Mainland. During and after W gales, the seas break across this bar.

Aiker Ness, the S point of a peninsula projecting N from the S side of the sound, is located about 1.5 miles SE of Eynhallow. Quoy, a rocky depth of 2.1m, lies 0.2 mile N of this point. A rocky depth of 4.6m lies 0.2 mile N of Quoy and another rocky depth of 9.1m lies 0.1 mile S of it.

14.45 Wyre (59˚07'N., 2˚58'W.), 30m high, is separated from Rousay by Wyre Sound, a passage, which is 0.5 mile wide and connects Eynhallow Sound with Rousay Sound. The fairway leading through this passage has a least depth of 5.7m. However, it is narrow, constricted, and should not be attempted without local knowledge.

Wyre Skerries, consisting of five drying reefs, lies 0.5 mile W of Wyre, on a shoal which extends W from the island.

Gairsay (59˚05'N., 2˚58'W.), an island 101m high, is located 1.3 miles S of Wyre, in the SE entrance to Eynhallow Sound. Sweyn Holm, an islet lying close E of this island, is described with Stronsay Firth.

Gairsay Sound, lying between Wyre and Gairsay, connects Eynhallow Sound with Stronsay Firth. The fairway has depths of 11 to 18.2m, but its width is reduced to only 0.5 mile, at the E end, and less than 0.3 mile, at the W. A detached 9.1m depth lies in the W entrance, about 0.5 mile SW of the W point of Wyre. This narrow sound is not marked and should not be attempted without local knowledge.

The fairway leading into Wide Firth, between Mainland and Gairsay, is obstructed by several reefs.

Little Seal Skerry (59˚04'N., 2˚59'W.) has a depth of 0.9m and lies in mid-passage, almost 0.5 mile S of the SW point of Gairsay. Rendall Holm, a rock 2m high, lies close offshore on a reef located 0.3 mile SW of Little Seal Skerry.

Seal Skerry, a drying reef, lies 0.5 mile S of Little Seal Skerry and is marked by a beacon. Depths of less than 9m lie between Seal Skerry and Little Seal Skerry, and between Seal Skerry and Mainland.

The narrow passage leading between Seal Skerry and Rendall Holm is repoprted to have a depth of 6m.

Wide Firth is entered from the NW via Eynhallow Sound. The channel leads between the Ness of Boray, the S point of Gairsay, and a point located on Mainland, 1 mile SW.

Protected anchorage is available in depths up to 12.8m in mid-channel, S of the SE point of Rousay.

14.46 The E approach to Kirkwall is the only one of the three approaches available for deep-draft vessels. It leads through Shapinsay Sound and The String, a comparatively narrow channel that connects the W end of Shapinsay Sound with the E part of Wide Firth.

The E entrance to Shapinsay Sound lies between Rerwick Head, the NE extremity of Mainland, and Hackness, the S extremity of Shapinsay.

The fairway leading through Shapinsay Sound and The String is only 0.5 mile wide at its narrowest point. It has general depths of 22 to 29m.

Tides—Currents.—About midway between Twinness and Car Ness, the E current begins in The String, about 4 hours before HW at Stromness. It sets in an ESE direction and attains a velocity of about 3.5 knots at springs. This current is reported to increase to 4 knots in the narrowest part of The String. About midway between Hackness and Rerwick Head, it attains a velocity of about 3 knots at springs.

When the E current in the middle of Shapinsay Sound is strong, counter-currents may run in a W direction along both sides of the sound. Between Rerwick Head and Hackness, it is probable that the current is much stronger in mid-channel than near the land. There is little or no tidal currents within the Bay of Meil, Inganese Bay, Ellwick, and the Bay of Carness.

About midway between Hackness and Rerwick Head, the W current begins 3 hours 20 minutes after HW at Stromness and attains a velocity of nearly 2 knots at springs. Little or no W current is felt in the areas which lie N of a line extending between Hackness and the S extremity of Hellier Holm, or S of a line extending between Rerwick Head and Head of Work. In a position about 0.5 mile S of Twinness, the current sets in a NW direction and attains a velocity of nearly 4 knots at springs.

Pilotage.—Pilotage is compulsory for certain vessels. See paragraph 14.1 for further information.

14.47 Between Rerwick Head and Yinstay Head, the coast recedes to form a bight, known as Yinstay Bay. Rerwick Head is described with Strongsay Firth.

Yinstay Head (58˚59'N., 2˚51'W.) consists of cliffs, 9m high, and is fronted by close-lying detached rocks. Skerry of Yinstay, Little Skerry, and Scare Gun are drying reefs lying on Yinstay Spit, a shoal, which extends up to 0.5 mile ENE from the point.

Inganess Bay (58˚58'N., 2˚54'W.) is entered between Yinstay Head and Head of Holland, 1.3 miles WNW. Reefs and shoals fringe the shore of this bay and depths of less than 9m extend up to 0.3 seaward. The bay has general depths of 11 to 22m, over a bottom of sand and shells with good holding ground, and there is practically no tidal currents.

Head of Holland (59˚00'N., 2˚54'W.) is formed by sheer cliffs, 15m high, and is conspicuous.

The Bay of Meil lies close N of this point. A stranded wreck, marked by a buoy, lies near the head of this bay, 1.8 mile S of Head of Holland. Another stranded wreck lies close offshore, 2 miles SSW of the same point.

Head of Work (59˚01'N., 2˚54'W.) is the SE entrance point of The String. A beacon stands on this bold headland.

14.48 The N side of Shapinsay Sound lies between Hackness and Lufa Ness, 2 miles WNW. In Sandgarth Bay, depths of less than 9m extend up to almost 0.4 mile offshore.

Helliar Holm (59˚01'N., 2˚54'W.) lies close S of Lufa Ness and a light is shown from its S end. This islet is 27m high and a beacon stands on its summit.

The String, a passage, connects Shapinsay Sound with Wide Firth. The E entrance lies between Head of Holm and Helliar Holm. The passage is entered from the W between Strombery, the SW point of Shapinsay, and Thieves Holm, an islet lying cl

Directions.—Vessels should steer a mid-channel course through The String. From the E, the approach fairway lies within the white sector of Helliar Holm Light. A red sector of this light indicates the W approach fairway.

During W and SW gales, protected anchorage is available within Inganess Bay with a bottom of sand and shell, good holding ground.

14.49 The N part of Wide Firth is connected to the W part of Stronsay Firth at a place lying between Galt Ness, the NW extremity of Shapinsay, and Sweyn Holm, an islet lying close off the NE side of Gairsay. The entrance can only be used by vessels having local knowledge and with drafts of less than 4.9m. Because of the numerous islets, reefs, and shoals, it is recommended that vessels use the approach channels leading through Eynhallow Sound or Shapinsay Sound.

Particular caution is necessary in the navigation of Wide Firth. There are numerous off-lying dangers, some of which are not marked, and there are few landmarks available. Navigation in the firth is often impeded by the misty nature of the climate.

Tides—Currents.—In the channels lying between Gairsay and Shapinsay, the tidal current runs strongly. On the W side and in a position 0.5 mile E of Ness of Gairsay, the S current begins about 4 hours before HW at Stromness and attains a velocity of 3.3 knots at springs. The N current in this position begins about 1 hour 20 minutes after HW at Stromness and attains a velocity of about 2.5 knots at springs. On the E side and in a position about 0.5 mile N of Salt Ness, the S current begins about 4 hours before HW at Stromness and attains a velocity of about 1.5 knots at springs. The N current in this position begins nearly 2 hours after HW at Stromness and attains a velocity of about 1.8 knots at springs. On the W side of the channel, the S current is of a shorter duration, but runs at a greater velocity than that on the E side where the conditions are reversed. In the S entrance and at a position about 0.5 mile NE of Linga Skerry, the S and N currents begin, respectively, about 4 hours 15 minutes before and 2 hours after HW at Stromness. Each current attains a velocity of 3 to 4 knots at

springs. In Vasa Sound, it is reported that the currents attain velocities of up to 5 knots at springs.

From the SW end of the channel leading between Gairsay and Mainland, the current flows in a S direction along the coast of Mainland at a velocity of about 1.5 knots at springs. The main body of this current continues in a SE direction across Wide Firth and joins the S current which flows from the channels lying between Gairsay and Shapinsay.

The W current flowing from The String turns in a NW direction around Strombery and sets between Linga Skerry and Shapinsay. In a position about 0.5 mile NE of Linga Skerry, it flows in a N direction. In this position, the W current begins nearly 2 hours after HW at Stromness and attains a velocity of 1 knot at springs. From a position located between Linga Skerry and Shapinsay, this current flows in a N direction through the channels leading between Gairsay and Shapinsay, and in a NW direction toward the channel leading between Gairsay and Mainland. A small part of the W current flowing from The String sets across Wide Firth toward Crookness where it turns in a N direction toward the channel leading between Gairsay and Mainland. This part of the current attains a velocity of 1 to 1.5 knots at springs.

Pilotage.—Pilotage is compulsory for certain vessels. See paragraph 14.1 for further information.

14.50 The NW side of Wide Firth is formed by the S shore of Gairsay and the part of the E coast of Mainland lying between a point located 1 mile SW of the Ness of Boray and Crookness.

Ness of Gairsay (59˚04'N., 2˚57'W.) is the S point of Hen of Gairsay, an islet, which is connected to the E coast of Gairsay by a narrow isthmus. Milburn Haven, a narrow inlet, lies close W this islet. Ness of Boray, the SE point of Gairsay, is located 0.8 mile W of Ness of Gairsay.

Boray Holm (59˚04'N., 2˚57'W.), an islet 6m high, lies at the S end of the spit which extends S from Gairsay. Depths of less than 4m lie between this islet and Gairsay.

Between a point on Mainland, located 1 mile SW of Ness of Boray, and Crookness, 1.5 miles S, the coast extends in a general S direction. Depths of less than 5m lie up to almost 0.3 mile offshore in places along this stretch of the coast.

Crookness (59˚02'N., 3˚01'W.) lies at the S end of the peninsula that projects S from the coast of Mainland. Harpy Taing, a rocky point, is located 0.2 mile N of the E extremity of Crookness.

14.51 The W coast of Shapinsay, between The Galt, the NW point of the island, and Strombery, the SW point, forms the E side of Wide Firth. Depths of less than 5m extend up to 0.2 mile offshore along this stretch of the coast.

Vasa Point (59˚03'N., 2˚55'W.) is located about midway along the W coast of Shapinsay. Vasa Skerry, an irregular and broken reef, extends 0.2 mile seaward. This reef lies 0.1 mile W of Vasa Point and a beacon stands on its S end. Vasa Sound, the passage separating Vasa Skerry and the point, can be used by vessels with drafts up to 4.9m. Vessels without a pilot should not attempt to enter Wide Firth from the N, except through Vasa Sound.

Caution.—The N part of Wide Firth enclosed by Gairsay, the W coast of Shapinsay, and the E coast of Mainland, has irregular depths and is encumbered by numerous islets, rocks, and skerries. A detached shoal area, with depths of less than 9m, lies in the approach, midway between The Galt and Hen of Gairsay.

Boray Skerries, consisting of two groups of rocks awash at LW, lies 0.5 mile SE of Ness of Boray. A detached shoal, with a depth of 2.7m, lies midway between these groups and Ness of Boray.

14.52 Skertours (59˚04'N., 2˚56'W.), a group of drying rocks, lies 0.5 mile E of Boray Skerries. Grass Holm, an islet, is 6m high and lies 0.5 mile SE of this group of rocks.

Taing Skerry, a rock, is 3m high and located on a drying reef which lies about 0.5 mile S of Skertours.

Broad Shoal, with a depth of less than 6m, extends 0.5 mile S from Grass Holm. Several drying rocks lie on this shoal.

An isolated shoal, with a least depth of 5.4m, lies 1 mile W of Vasa Point.

An extensive shoal area, with depths of less than 6m, extends S from the vicinity of Seal Skerry.

Puldrite Skerry, a drying reef, lies 2 miles W of Vasa Point.

Linga Skerry, with a depth of 0.3m, lies 1.5 miles SW of Vasa Point and is marked by a lighted buoy moored on its SE side.

West Skerries, with a least depth of 0.9m, lies about 0.3 mile SW of Linga Skerry.

14.53 Between Crookness and Ramberry, 1.8 mile S, the shore recedes inland and forms two bays.

Bay of Isbister (59˚03'N., 3˚02'W.) is entered between Crookness and Mou Ness, 1 mile W. The E side of this bay is bold. The W side and the head of the bay are very flat and shoal. Anchorage is available in a depth of 11m, mud with good holding ground, within the bay.

Bay of Firth (59˚00'N., 3˚05'W.) lies between Point of Backaquoy and Ferry Point, 1 mile SE. This shallow bay is encumbered by reefs, sunken rocks, and shoals. The village of Finstown stands at the head. Holm of Grimbister and Damsay, two islets, lie near the middle of the bay. The passage lying between Damsay and Mainland is known as Damsay Sound.

Ramberry (59˚00'N., 3˚00'W.) is the W entrance point of the Bay of Kirkwall. Quanterness Skerry, a drying reef, lies 0.3 mile N of the point. Scargun Shoal, with a depth of less than 2m, lies 0.8 mile E of the point and is marked by a buoy, moored close N of it.

Bay of Kirkwall (59˚00'N., 2˚58'W.) is entered between Ramberry and Car Ness. This bay shelves gradually, having a depth of 14m in its central part and a depth of 5m near the head.

14.54 Kirkwall (58˚59'N., 2˚57'W.) (World Port Index No. 32440), the capital and principal city of the Orkney Islands, is situated at the head of the Bay of Kirkwall.

Tides—Currents.—The tidal currents in the bay are very weak.

Tides rise about 2.9m at springs and 2.2m at neaps.

Depths—Limitations.—There is a total of 684m of quayage in the harbor. The main ro-ro berth, which is 79m long, and a berth used by coastal tankers have depths of 5m alongside.

Vessels of up to 110m in length and 5m draft can be accommodated at HW.

Aspect.—St. Magnus Cathedral, a red sandstone building with a conspicuous spire, stands in the city.

The entrance channel is indicated by the white sector of the light shown from the head of the main pier.

Pilotage.—Pilotage is compulsory for certain vessels. See paragraph 14.1 for further information.

Anchorage.—The anchorage area is exposed to N winds, but they seldom cause a heavy sea and the holding ground is good. Vessels with drafts of less than 4.9m can anchor about 0.3 mile N of the main pier. Other vessels may anchor as convenient in depths up to 12.8m within 1 mile N of the pier.

Approaches to Scapa Flow

14.55 Hoy Sound, the W approach to Scapa Flow, is described first, then the S entrance.

Aspect.—Scapa Flow, the best anchorage in the Orkney Islands, is an extensive body of water bounded by the islands of Hoy, Mainland, Burray, and South Ronaldsay. This roadstead can be approached either from the W or the S.

Hoy Sound, the W approach, is a comparatively narrow channel that lies between the NE coast of Hoy and the W part of the S coast of Mainland.

The S entrance, which is approached via Pentland Firth, lies between South Ronaldsay and several smaller islands, lying off the SE coast of Hoy.

Tides—Currents.—In the W entrance to Hoy Sound, the E current begins about 5 hours before HW at Stromness and attains a velocity of about 4 knots at springs. In the narrow channel lying between The Ness and Point of Oxan, the current reaches a velocity of about 8.5 knots at springs. After passing through this narrow channel, the current is deflected by the shoals, lying N of Graemsay, and flows in a general E direction toward Clestron Skerries. The current divides W of Clestron Skerries. One part flows N into the Bay of Ireland and then W through Cairston Road, forming a weak counter-current. The other part of the current, which is the stronger, flows in a SE direction along the coast of Mainland, leaving a large area of relatively slack water off the E coast of Graemsay. Near Clestron Skerries, the current attains a velocity of 4 knots at springs. Its velocity then rapidly decreases as the current flows S. From Clestron Sound, the current flows through Bring Deeps and then out into Scapa Flow. The velocity of the E current in Bring Deeps does not exceed 1 knot at springs.

It is believed that the W current in Bring Deeps begins about 1 hour 30 minutes after HW at Stromness and that its velocity does not exceed 1 knot at springs. From Bring Deeps, the W current flows toward Graemsay and along the W side of Clestron Sound. It increases in velocity and may attain a rate of 4 knots at springs. A weak branch of this current may flow into Bay of Ireland and W through Cairston Road, but the main part turns in a W direction toward the narrow channel lying between The Ness and Point of Oxan. Within this channel, the W current attains a velocity of about 7 knots at springs. In the W entrance of Hoy Sound, the velocity of the W current is about 4 knots at springs.

Heavy tide rips occur in Hoy Mouth when the ebb tidal current meets the Atlantic swell. During W gales, these tide rips cause a dangerous sea.

14.56 Hoy Mouth, the W entrance to Hoy Sound, is 3 miles wide and lies between Kame of Hoy, the conspicuous NW point of Hoy, and Breck Ness, on Mainland.

Hoy Sound extends 6 miles from its W entrance to the W limit of Scapa Flow and the fairway has depths of 11 to 43m.

Graemsay lies in mid-channel, 2 miles within the entrance. This island divides the sound into two channels.

Burra Sound, the S channel, is blocked by obstructions (sunken vessels) and the N channel, leading between Graemsay and Mainland, is the only one available to shipping.

Bring Deeps is that part of the sound which lies within a line extending from Bring Head, on Hoy, to Howton Head, on Mainland, and a line extending from Green Head, on Hoy, to Howton Head.

Breibister Point (Braeburter Point) (58˚56'N., 3˚21'W.), the N point of Hoy, lies 1.5 miles ENE of Kame of Hoy. Out Taings, a reef, extends up to 0.3 mile N of the point.

Taing of Selwick, a drying reef, extends 0.3 mile N from a point on the shore, 0.5 mile E of Breibister Point.

Bow of Hoy, a rocky 2m depth, lies at the N end of Taing of Selwick, 0.5 mile NE of Briebister Point.

Bu Point (58˚56'N., 3˚19'W.), the NE point of Hoy, is fronted by Hoy Skerries, which consists of three drying reefs and extends up to about 0.3 mile NE.

Kirk Rocks (58˚57'N., 3˚20'W.), the outermost danger on the N side of the entrance, lies 0.3 mile offshore, 0.8 mile SE of Breck Ness. With any swell, the sea breaks heavily over this group of rocks.

The Ness, a low and flat point, is located 1.3 miles E of Kirk Rocks and forms the W entrance point of Stromness Harbor.

Skerry of Ness (58˚57'N., 3˚18'W.), an extensive drying reef, extends up to 0.1 mile S from The Ness and is marked by a light at its S edge.

14.57 Graemsay (58˚56'N., 3˚17'W.), an island 62m high, lies in the middle of Hoy Sound between Bu Point, on Hoy, and The Ness, on Mainland.

A light (Hoy Sound Low Light) is shown from Point of Oxan, the NW point of the island. Another light (Hoy Sound High Light) is shown from Sandside Point, the NE point of Graemsay. These two lights form a range and, bearing 104˚, indicate the fairway leading into Hoy Sound. Drying reefs and shoals fringe the island on all sides and reduce the channel leading between Mainland and Graemsay to a width of 0.1 mile.

Showbelly, a rocky depth of 4.3m, lies 0.3 mile NNE of Point of Oxan and is the outermost danger located off the N side of Graemsay.

A lighted buoy marks the N edge of the shoal which extends N from Sandside Point.

Directions.—Vessels entering Hoy Sound from the W should proceed with the light structures standing on Point of Oxan and Sandside Point in line. This range leads between Kirk Rocks and Bow of Hoy. When S of Kirk Rocks, vessels should steer to pass midway between the Mainland shore and Showbelly, and about 0.2 mile S of the light beacon situated on Skerry of Ness.

STROMNESS HARBOR

After clearing the shoals extending N from Sandside Point, vessels should steer for Hall of Clestrain, a conspicuous grey building situated 1.8 mile NE of Sandside Point. When the light on Sandside Point bears about 198˚, vessels should then steer a course of 138˚ which will lead between Sand Eel and Skerries of Clestron. This course also leads E of Riddock Shoal, E of the 2.4m obstruction lying close SE of the shoal, and into Clestran Sound. After passing midway between Riddock Shoal and the coast of Mainland, vessels should adjust course to the S in order to avoid Peter Skerry and the shoals extending from the shore NW of it.

Caution.—Vessels should not attempt to pass through Hoy Sound at night without local knowledge.

After W gales, low-powered vessels should not leave Hoy Sound with the ebb tidal current because of the heavy overfalls formed in Hoy Mouth.

Submarine cables lie across Hoy Sound and may best be seen on the chart.

14.58 Stromness (58˚58'N., 3˚18'W.) (World Port Index No. 32450) is the second largest town in the Orkney Islands. The harbor lies on the N side of Hoy Sound and is entered between The Ness and Outer Holm, an islet lying 0.3 mile NE.

Tides rise about 3.6m at springs and 2.7m at neaps. The tidal currents within the harbor are negligible.

There are three berths, 70 to 74m long, with depths of 4.5 to 6.5m alongside. Vessels of up to 100m in length and 6m draft can be accommodated. There are facilities for coastal cargo and ro-ro vessels.

A lighted range, bearing 317˚, leads into the harbor. The harbor authorities can be contacted by VHF. For pilotage information, see paragraph 14.1.

Protected anchorage is available within the harbor in a depth of 7.3m, good holding ground. However, the harbor is small and often congested with numerous small vessels.

14.59 East of Stromness, the coast curves N and forms the Bay of Navershaw and the Bay of Ireland.

Bay of Navershaw (58˚58'N., 3˚16'W.) is entered between Rom Ness and Bu Point. Cairston Road lies close S of this bay and provides good anchorage.

Bay of Ireland (58˚58'N., 3˚15'W.) is entered between Bu Point and Nazegeo Point, 1 mile E. A shoal, with a least depth of 2.7m, extends completely across the entrance.

This bay is generally shallow and of little importance to shipping, although small coastal vessels can anchor there.

Mallow Bank (58˚57'N., 3˚15'W.) has depths of 1.8 to 5.4m over a bottom of soft and muddy sand. It is almost 1 mile long and lies in the middle of the approach to the bays.

Clestran Sound (58˚56'N., 3˚15'W.) lies between the E side of Graemsay and the coast of Mainland. From the N, this passage is entered between Sandside Point, on Graemsay, and Skerries of Clestran.

Except for an obstruction, with a depth of 5.6m, extending E from Riddock Shoal, the fairway has depths of 11 to 51m. The narrowest part of the passage is about 0.4 mile wide.

Sandside Point is described with the island of Graemsay.

The Nevi (58˚56'N., 3˚16'W.) is the SE point of Graemsay. The 10m curve in this vicinity extends up to 0.5 mile S from the point, and Sow Skerry and Sour Skerry lie within this curve.

14.60 Skerries of Clestran (58˚57'N., 3˚14'W.) lie close offshore, 1 mile ENE of Sandside Point. These rocks dry up to 1.8m and form the NE entrance point of Clestran Sound.

Howton Head (58˚55'N., 3˚12'W.) is a prominent headland, 58m high, which is surmounted by a conspicuous building. Peter Skerry lies within the 10m curve, 0.8 mile NW of the point, and is marked by a buoy, moored close NW.

Hill of Midland, 162m high, rises 1 mile NE of Howton Head and Ward Hill, the highest elevation on Mainland, stands 2 miles NNE of it. This hill is 268m high and a beacon stands on the summit.

Sand Eel (58˚56'N., 3˚16'W.), a sandy shoal, lies 0.5 mile NE of Sandside Point and has depths of less than 10m. The least depth of 3.6m lies on the NW side of the shoal.

Riddock Shoal (58˚56'N., 3˚15'W.), with depths of less than 4m, lies E of Graemsay and is marked by a lighted buoy, moored close E.

Bring Deeps (58˚54'N., 3˚14'W.) is the water area lying SW of Houton Head. It connects Hoy Sound with Scapa Flow. See paragraph 14.75.

Caution.—A spoil ground area, the limits of which are shown on the chart, lies within Bring Deeps, 1 mile SSW of Howton Head.

A submarine obstruction, with a least depth of 5.8m, extends ENE from Riddock Shoal to within 0.3 mile of the shore of Mainland.

Submarine cables are laid across Clestran Sound and may best be seen on the chart.

Scapa Flow—South Approach

14.61 The principal entrance to Scapa Flow lies between Brough Ness, the S extremity of South Ronaldsay, and Cantick Head, the E point of South Walls. The island of Swona lies nearly midway between these two points. Swona and the S coasts of Hoy, South Walls, and South Ronaldsay are described with the N side of Pentland Firth in Sector 8.

Scapa Flow is covered by surveillance radar. For details of pilotage information, see paragraph 14.1.

14.62 South Ronaldsay.—From Brough Ness, the W coast of South Ronaldsay extends 6 miles in a general N direction to Hoxa Head, the NW point of the island. The coast is fringed by rocks, but there are no known off-lying dangers.

Bur Wick (58˚44'N., 2˚58'W.), a small and shallow bay, is entered between Brough Ness and The Wing, a 15m high cliff, 0.8 mile NW. This bay lies close N of Lother Rock, which is described in Sector 8.

The Creel, a reef, extends 0.1 mile S from The Wing and a detached shoal, with a depth of 6.4m, lies 0.1 mile farther SE. Barth Head, a sheer slate cliff, is located 1.3 miles NW of Bur Wick and is 48m high.

Herston Head (58˚49'N., 3˚01'W.), a peninsula, projects NW from the coast and forms the S entrance point of Widewall Bay. Rugged cliffs extend for 3 miles between Barth Head and Herston Head and several small bays indent this stretch of the coast.

Widewall Bay (58˚49'N., 3˚00'W.) is entered between Herston Head and Hoxa Head. The entrance is 0.5 mile wide and the fairway has depths of 10 to 36m. The N part of the bay has general depths of 7 to 20m and the S part has depths of less than 5m.

Hoxa Head (58˚49'N., 3˚02'W.), 45m high, is located at the SW end of the peninsula which extends SW from the NW point of South Ronaldsay. This peninsula forms the NW shore of Widewall Bay. It can be easily identified by the numerous concrete gun emplacements and a light, which is shown from a tower standing on the NW side.

Small vessels can anchor as convenient, according to their draft, within Widewall Bay. The bottom is sandy and shelves gradually toward the head. Large vessels are advised not to seek anchorage as the outer part of the bay can be hazardous with W gales.

14.63 Switha (58˚48'N., 3˚06'W.), a small island, is 17m high. It lies on the E side of the approach to the bay, about 0.8 mile NE of Cantick Head.

Cantick Head is described in Sector 8.

Cantick Sound, which leads between Switha and the E coast of South Walls, is free of dangers. The fairway has a depth of 19.8m and is about 0.3 mile wide.

Long Hope, a rather narrow inlet, extends inland for 3.5 miles between Hoy and the N coast of South Walls. The inner half of this inlet, which lies W of a line extending between North Ness and South Ness, is generally shallow, foul, and of little interest to shipping.

Hackness (58˚48'N., 3˚09'W.) is the S entrance point of Long Hope. A conspicuous martello tower stands close inland of the point.

Crock Ness (58˚49'N., 3˚10'W.), the N entrance point of Long Hope, is located 1 mile NW of Hackness. A conspicuous martello tower stands on this point. The Ruff, a drying reef, extends 0.2 mile E from the point and is marked by a lighted buoy at its E end.

The fairway leading into Long Hope has a depth of 18m in the entrance. In the narrow passage lying between North Ness and South Ness, which is only about 90m wide, the fairway has a depth of 6.8m.

Caution.—Submarine water pipelines and a submarine cable, which may best be seen on the chart, lie across the channel leading between Hoy and Flotta. Their landing places are marked by beacons.

14.64 South Ness (58˚48'N., 3˚12'W.), on the N coast of South Walls, is located 2 miles within Long Hope and fringed by a drying spit. A prominent church, with a belfry, stands near the shore, 0.5 mile E of this point. A pier, marked by a light, extends 85m NE from the E side of the point and has a depth of 5m alongside.

Vessels may anchor as convenient, according to their draft, anywhere within the entrance to Long Hope. There are depths of 7 to 13m over a bottom of mud, sand, and weeds. In places, heavy growths of weeds can be found.

An area of foul ground and a wreck lie in the middle of the entrance, 0.5 mile S of Crock Ness.

Directions.—Vessels approaching Long Hope from the S, during the last part of the E tidal current in Pentland Firth, should pass well S and E of Switha. They should then pass through Switha Sound in order to make the best use of the tidal currents.

During the first part of the E tidal current, vessels, in order to make the best use of the tidal currents, should round Cantick Head as closely as possible because the current in this vicinity occasionally attains a velocity of 4 knots and sets in a NE direction.

Low-powered vessels, which are approaching Long Hope from the vicinity of Duncansby Head during the first part of the W tidal current in Pentland Firth, should stay close along the coast of South Ronaldsay until it is convenient to steer for the entrance of Switha Sound. They should then pass between the NE extremity of Switha and the SE extremity of Flotta. Low-powered vessels bound W from Long Hope should be aware that a counter-current will be found setting around Cantick Head about 10 minutes before HW at Stromnessand. This current sets in a W direction as far as Tor Ness.

Low-powered vessels bound S from Long Hope should arrive off Duncansby Head when the SE tidal current begins, about 3 hours 15 minutes before HW at Stromness. Such vessels should pass through Switha Sound, where they can probably take advantage of the counter-currents, at about 5 hours 30 minutes before HW at Stromness. They should then steer for Barth Head where the W current will carry them towards Duncansby Head and leave them in a good position to take advantage of the first part of the SE tidal current.

14.65 Switha Sound (58˚49'N., 3˚06'W.) leads between the S side of Flotta and the island of Switha, and between the W side of Flotta and the entrance to Long Hope. The E entrance to this sound lies between North Taing, the NE point of Switha, and Stanger Head, on Flotta. Switha Sound can also be entered from the S between Hackness and Point of the Pool.

A line extending between Crock Ness and the W extremity of Flotta forms the N limit of Switha Sound. From here, it is connected to Scapa Flow by Gutter Sound and West Weddel Sound.

The fairway in the sound is about 0.5 mile wide for its full length, about 3 miles. It has depths of 16 to 31m at the E entrance and is free of dangers.

Flotta, 57m high, lies on the NW side of the S approach to Scapa Flow.

Stanger Head (58˚49'N., 3˚05'W.) is the SE point of Flotta. From this point, the coast extends W for 1.5 miles to Innan Neb, the SW point of the island. Stranger Head, marked by a light, is steep-to on its S and E sides. A tower, 50m high, stands 0.3 mile NW of the point and several chimneys are situated close N of it.

Kirk Bay, small and shallow, lies close W of Stanger Head. An outfall pipeline extends 1.3 miles SSE from the head of this bay.

The E and N coasts of Flotta are described with Scapa Flow.

Orkney Islands—Scapa Flow

14.66 Scapa Flow affords sheltered anchorage in a land-locked harbor, which is protected on its N side by Mainland. The island of Hoy, along with several off-lying islands, protects the SW side and the islands of Burray and South Ronaldsay protect the SE side. There are general depths up to 36m throughout the area over a bottom of mainly mud and sand. Tidal currents within the harbor are negligible. However, with strong gales, there is a surge from side to side, which may be considerable at times.

Vessels may anchor as convenient almost anywhere E of Cava, except in the prohibited areas. No matter what the direction of the wind may be, vessels can always find shelter within Scapa Flow by shifting berth.

The shores of the harbor are generally steep-to with only a few off-lying dangers.

Caution.—Numerous prohibited anchorage areas lie within Scapa Flow and may best be seen on the chart.

14.67 Sound of Hoxa leads into the SE part of Scapa Flow and lies between the E side of Flotta and the W coast of South Ronaldsay. From the S, this passage is entered between Stanger Head, on Flotta, and Hoxa Head, on South Ronaldsay.

Tides—Currents.—The flood current in the Sound of Hoxa is considerably affected by eddies and never runs across the entire width of the sound. The ebb current is also affected by eddies at first, but from about 3 hours 30 minutes after HW at Stromness until the beginning of the flood current, it runs in a SW direction across the entire width of the sound between Hoxa Head and Quoy Ness.

The flood current off Stanger Head may attain a velocity of up to 4 knots in places at springs. This current usually attains its maximum strength at about 4 hours 30 minutes before HW at Stromness, but it is generally weak between Stanger Head and Hoxa Head. However, off Hoxa Head, the current may attain a velocity of 2 knots at springs.

At about 4 hours 30 minutes before HW at Stromness, the entire channel in the vicinity of Hoxa Head is filled by a large eddy which rotates in a counter-clockwise direction. The velocity of this eddy varies between l.5 and 2 knots at springs. To the N of the eddy, the currents are generally weak with velocities of not more than 0.5 knot.

The ebb current, although more regular, is considerably weaker than the flood current. At about 3 hours 30 minutes after HW at Stromness, this current runs in a SW direction across the entire width of the sound between Roan Head and Hoxa Head. It continues without change until the flood current begins. When the ebb current begins, its velocity, on the W side of the channel off Hoxa Head, is about 1.5 knots at springs. However, elsewhere in the sound, this current does not exceed a velocity of 0.5 knot.

Caution.—Submarine oil pipelines, which may best be seen on the chart, extend E from Curries Firth through Hoxa Sound and Water Sound to the Claymore, Piper, and Tartan Oil Fields.

The Grinds (58˚51'N., 3˚02'W.), the N most shoal area, is narrow and is marked by a lighted buoy, moored at its NE end.

Nevi Skerry (58˚51'N., 3˚03'W.), consisting of two drying and steep-to rocks, lies about 0.8 mile E of Roan Head and is marked by a lighted beacon.

Vessels entering or leaving Scapa Flow via the Sound of Hoxa usually pass W of Nevi Skerry. The channel is 0.5 mile wide at its narrowest part and has depths of 22 to 54m.

Caution.—Nevi Skerry should not be approached within 150m from any direction.

14.68 Stanger Head, the SW entrance point of the Sound of Hoxa, is described with the S coast of Flotta.

Quoy Ness (58˚50'N., 3˚05'W.), the S entrance point of Pan Hope, is located 1 mile N of Stanger Head.

Pan Hope is entered between Quoy Ness and Roan Head, 1 mile NNE. Small vessels can anchor in depths of 3 to 5.4m off the S shore of this shallow bay.

Caution.—A submarine pipeline, which may best be seen on the chart, lies in Pan Hope.

Roan Head (58˚51'N., 3˚04'W.) is the NE point of Flotta. A light is shown from this headland and a prominent chimney, 30m high, stands 0.5 mile W of it.

A drying reef fronts the shore 0.3 mile NNW of the light and is marked by a beacon.

Calf of Flotta lies N of Roan Head. This islet is 16m high and is separated from the N side of the headland by Calf Sound, which is shallow. A light is shown from the NE end of the islet and a lighted mooring buoy is situated close SW of the W end.

Hoxa Head, which forms the SE entrance point of Hoxa Sound, is described with the W coast of South Ronaldsay.

Croo Taing, located 1 mile NE of Hoxa Head, is the NE entrance point of the Sound of Hoxa.

Scapa Flow—Southeast Side

14.69 Water Sound, St. Margarets Hope, Hunda Sound, Echnaloch Bay, East Weddel Sound, Skerry Sound, and Kirk Sound comprise the SE side of Scapa Flow. These water areas will be described in the same order.

Water Sound (58˚50'N., 2˚57'W.), which lies between South Ronaldsay and Burray, is divided into two parts by a breakwater. The area lying W of the breakwater is described below. The area lying E of the breakwater is described with the E coasts of the Orkneys, under Holm Sound and Water Sound.

Water Sound is entered from the W between Croo Taing and Bor Taing, the W point of Hunda Island. Dam of Hoxa, a small bay, lies close E of Croo Taing.

St. Margarets Hope (58˚50'N., 2˚57'W.) is a small, shallow bay indenting the N coast of South Ronaldsay. It is entered between Needle Point and Knockhall Point, on the S side of

Water Sound. A small village stands at the head of the bay. A stone pier, with a depth of 2.7m off its outer end, is situated on the W side of the bay. Small vessels can anchor in a depth of 6m close E of the pier.

A spit extends about 0.1 mile E from Needle Point and is marked by a light at its E end.

A lighted range, bearing 196˚, indicates the fairway leading into the bay. This fairway leads between the end of the spit and an obstruction located 0.3 mile NW of Knockhall Point.

Hunda Sound (58˚51'N., 2˚57'W.) lies between the islands of Hunda and Burray. This small bay affords sheltered anchorage to small vessels in depths of 7 to 10m, sand over clay with good holding ground. However, it is reported that several marine farms have been established in the bay and must be avoided.

A reef, which dries and carries a road, blocks this sound and connects Burray to Hunda.

14.70 Echnaloch Bay (58˚52'N., 2˚55'W.) lies on the N side of Burray, between Swannies and Ward Point. This bay is open to the N and strong winds from that quarter raise a sea within it. Anchorage is not available in the bay due to the existance of several abandoned submarine cables.

East Weddel Sound (58˚52'N., 2˚55'W.) leads between Glims Holm and Burray. It is blocked by the breakwater which extends N from Ward Point to the vicinity of Tarri Clett, on Glims Holm. The area lying E of the breakwater is described with the E coasts of the Orkneys, under Holm Sound and Water Sound. The remains of blockships extend up to 0.1 mile seaward of the breakwater.

Skerry Sound (58˚53'N., 2˚54'W.) is entered from the W between Howequoy Head and the NW point of Glims Holm. A line extending from Skaildaquoy Point to Kirk Point, on Lamb Holm, indicates the boundary between Skerry Sound and Kirk Sound. The breakwater extending between Glims Holm and Lamb Holm closes the E entrance to this sound.

Kirk Sound (58˚54'N., 2˚54'W.) is entered from the W between Skaildaquoy Point and Kirk Point.

The area lying E of the breakwater, between Lamb Holm and Mainland, is described with the E coasts of the Orkneys, under Holm Sound and Water Sound.

St. Marys (58˚54'N., 2˚55'W.), a small village, stands on the N side of the passage. A small pier is situated at the W end of the village, 0.3 mile N of the extremity of Skaildaquoy Point. Another small pier is situated 0.4 mile NE of the latter point.

Caution.—A submarine cable lies in Skerry Sound and may best be seen on the chart.

Scapa Flow—Southwest Side

14.71 Fara, Rysa Little, Cava, and Barrel of Butter are described with this part of Scapa Flow.

Fara (58˚50'N., 3˚10'W.) lies between Flotta and Hoy. The S side of this island is located 0.5 mile N of Crock Ness. Thompsons Hill, the summit, rises near the center of the island and is 41m high. Two mooring buoys, marked by lights, are situated close off the E side of the island.

Flotta Marine Terminal (Scapa Flow Terminal) (58˚51'N., 3˚07'W.), a major oil and gas terminal, is situated in the N part of Flotta. It receives oil via a submarine pipeline which extends from the North Sea fields.

The terminal has a T-shaped jetty, with dolphins, which can accommodate vessels of up to 150,000 dwt loading crude oil or liquified natural gas. Two lighted single-point mooring towers have been constructed 1.5 miles off the N side of Flotta. Each mooring tower can accommodate vessels of up to 200,000 dwt. Submarine oil pipelines extend between these mooring towers and the N coast of Flotta. It was reported that tankers are generally restricted to a draft of 22.8m.

Pilotage.—See Scapa Flow.

Caution.—Dangerous wrecks, marked by lighted buoys, lie 0.5 mile WNW and 0.8 mile NNE of the jetty. Several other wrecks and foul areas lie in the vicinity of the terminal and may best be seen on the chart.

West Weddel Sound, the shallow passage lying between Fara and Flotta, is only 0.3 mile wide. It has a least depth of 3.9m over the bar at the N end. Gibralta Pier, a ro-ro terminal, is situated on the E side of this sound and has a depth of 3.3m alongside its head. Another pier, with a depth of 3.8m alongside its head, is situated on the SE side of the sound, 0.3 mile SW of Gibralta Pier.

Between Crock Ness (58˚49'N., 3˚10'W.), the N entrance point of Long Hope, and Green Head, 3.5 miles NNW, the E coast of Hoy is indented by several small bays.

Ore Bay (58˚50'N., 3˚12'W.), lying close N of Crock Ness, is shallow and fringed with reefs. Three piers extend from the N shore of this bay. A beacon stands on the slope of a hill, 1.5 miles W of the head of the bay.

Caution.—It was reported (1990) that several marine farms are situated within Ore Bay.

14.72 Lyness (58˚50'N., 3˚12'W.) (World Port Index No. 32490) lies close N of Ore Bay. Lyness Wharf and Golden Wharf, at the E side of the harbor, have depths of 7.9 to 9.4m alongside. A ro-ro ferry terminal is situated on the S face of Lyness Wharf. Vessels with drafts up to 7.6m can be handled in the harbor.

Caution.—Lyness Wharf is constructed of stone and is not fendered. The wharf face slopes outward at an angle of 8˚ from the vertical and vessels berthing alongside must be careful not to damage their propellors.

Prolonged W or NW gales usually form a moderate scend off the E face of Lyness Wharf.

Mill Bay (58˚51'N., 3˚12'W.) lies between Lyness and Point of Cletts, 0.5 mile NNW. A conspicuous house stands on the hillside, 0.3 mile W of the latter point.

Three dangerous wrecks lie about 0.3 mile SE of Point of Cletts and are marked by a lighted buoy, moored close E.

Small vessels may obtain anchorage in the outer part of the bay, but the bottom is liable to be foul with old wire hawsers.

14.73 Gutter Sound (58˚51'N., 3˚11'W.) is entered from the S between Point of Cletts and the W point of Fara. A line extending between the E point of Rysa Little and North Point, at the N extremity of Fara, forms the N boundary of this passage. The fairway has depths of 11 to 18m and is 0.3 mile

wide. The bottom is fouled with wire hawsers and old electric cables.

Pegal Head (58˚52'N., 3˚13'W.) lies about midway between Green Head and a point, marked by a post, 1.3 miles SSE. Pegal Bay lies on the S side of this headland and Lyrawa Bay lies on the N side.

Green Head (58˚53'N., 3˚13'W.) is the S entrance point of the E end of Hoy Sound. It also forms the NW entrance point of Rysa Sound.

Rysa Little (58˚52'N., 3˚12'W.) lies 0.4 mile E of Pegal Head and on the shallow shorebank. This islet is 20m high. Rysa Sound is entered from the N between Green Head and the N extremity of Rysa Little. This passage is entered from the S between the S point of Rysa Little and Ruberry, located 0.8 mile SE of Pegal Head.

The sound leads between Rysa Little and Hoy. It is only 0.2 mile wide and has a depth of less than 3m over the bar at the S end.

Anchorage is available near the middle of the sound in a depth of 14m, good holding ground. However, during strong gales, heavy squalls sweep down into the anchorage from the hills in the vicinity.

Good anchorage can be taken in depths of 18 to 20m in the middle of the entrance to Lyrawa Bay, but it is exposed to E winds.

14.74 Cava (58˚53'N., 3˚10'W.), an island, lies 1.3 miles E of Green Head and is 37m high.

A light is shown from Calf of Cava, an islet-like peninsula, which is connected to the N end of the island by a very narrow isthmus.

A conspicuous white building, in ruins, stands in the middle of the N part of the island, 0.5 mile SSE of the light.

A shallow sand spit extends 0.3 mile S from Ward Point, the S extremity of the island.

Barrel of Butter (58˚53'N., 3˚08'W.), a small rock that almost covers at HW springs, lies 1.5 miles E of the light shown from Calf of Cava and is marked by a conspicuous lighted beacon.

Scapa Flow—Northwest Side

14.75 From Houton Head, the N entrance point of the E end of Hoy Sound, the coast of Mainland trends 6.5 miles in a general ENE direction to the W entrance point of Scapa Bay. This part of the coast is rather irregular and is indented by several bays. A few detached dangers lie off the coast, which is comparatively steep-to.

Holm of Houton, a flat islet, lies 0.3 mile off the SE side of Houton Head. It is 10m high and connected to the point by a drying reef.

Houton Bay (Howton Bay) (58˚55'N., 3˚11'W.), a small and shallow bay, lies between Holm of Houton and Midland Ness. The channel leading into the bay is reduced to a width of about 90m by reefs that extend from both sides of the entrance.

Range lights, shown from the NW side of the bay, indicate the center of the entrance fairway which has been dredged to a depth of 3.5m. Two piers, each 130m long, extend S and SW from the head of the bay. The E most pier has a ro-ro terminal at its head with a dredged depth of 3.1m alongside.

Caution.—The area bordered by Holm of Houton, Calf of Cava, and Barrel of Butter is encumbered by numerous wrecks, the majority of which are the remains of the German High Seas Fleet, scuttled in 1919.

Swanbister Bay (58˚56'N., 3˚07'W.) is entered between Toy Ness and Ve Ness, 1.3 miles ENE. Smoogro Skerry, a reef, lies 0.8 mile W of Ve Ness and dries in places. A foul area extends up to 0.8 mile S from Ve Ness.

Prominent houses stand about 0.3 mile inland, 1.5 miles W and 1 mile NW of Ve Ness. In summer, with offshore winds, good anchorage is available in a depth of 11.6m, mud and sand, near the middle of this bay.

Waulkmill Bay (58˚56'N., 3˚05'W.), lying close E of Ve Ness, is shallow and of little importance to shipping.

Between the E entrance point of Waulkmill Bay and the W entrance point of Scapa Bay, the coast trends 2 miles ENE and is free of off-lying dangers.

Scapa Flow—Northeast Side

14.76 From Howequoy Head (58˚53'N., 2˚56'W.), the NE shore of Scapa Flow extends 3 miles in a general NNW direction to a point, which is known as Hemp Stack, located 1 mile NNW of the mouth of Burn of Deepdale.

Between Burn of Deepdale and Hemp Stack, the coast is bold, steep-to, and free of off-lying dangers.

A dangerous wreck, with a least depth of 1.8m, lies 1 mile NW of the mouth of Burn of Deepdale and a lighted buoy is moored close SW of it.

Scapa Bay (58˚57'N., 2˚59'W.) (World Port Index No. 32500) is entered between Hemp Stack and Hesti Geo, a small and rocky cove, lying 1.3 miles NW. Scapa Skerry, a reef almost awash, lies in the middle of the entrance channel and is marked by a lighted buoy, moored on its SE side.

A pier, with a depth of 3m alongside its head, extends 183m seaward from the NE shore of the bay. Coastal tankers of up to 80m in length can be handled alongside. It was reported (1991) that this pier was to be extended.

The E side of the bay is fronted by a bank which extends up to 0.2 mile seaward in places. The head of the bay dries up to about 0.2 mile offshore. A prominent house stands near the head and a conspicuous cathedral is situated at Kirkwall, 1.3 miles NNE of it. See paragraph 14.54.

Large vessels are advised to anchor SE of the lighted buoy marking Scapa Skerry.

Small vessels may obtain anchorage about 0.3 mile SW of the pier.

Caution.—Winds from the SW cause a considerable sea within Scapa Bay and the anchorage cannot be used.

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