

Global Change Data Encyclopedia

Orkney Islands, United Kingdom

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The Orkney Islands is located in Scotland, northeastern the United Kingdom, lying about 32 km north of the Scottish mainland^[1], between Northern Atlantic Ocean and North Sea, the Great British and Shetland Islands^[2]. Its geo-location is 58°43'46"N–59°23'59"N, 3°26'12"W–2°22'11"W^[3] (Figures 1–2).

There are 104 islands and islets with area bigger than 70 m² in Orkney Islands including small islands, isles and independent rocks^[3]. The largest one of the islands is Mainland. The small islands of Lamb Holm (58°53'16"N, 2°53'36"W), Glims Holm (58°52'32"N, 2°55'4"W), Burray (58°51'12"N, 2°54'27"W) and South Ronaldsay (58°47'45"N, 2°57'13"W), to the south of the Mainland, are now joined successively to it by constructed causeways. Its area is 581.85 km² and its coastline length is 368.51 km. The second largest island of the Orkney Islands, Hoy, lies southwest of the Mainland, along with smaller



Figure 1 Map of Orkney Islands dataset (.kmz format)

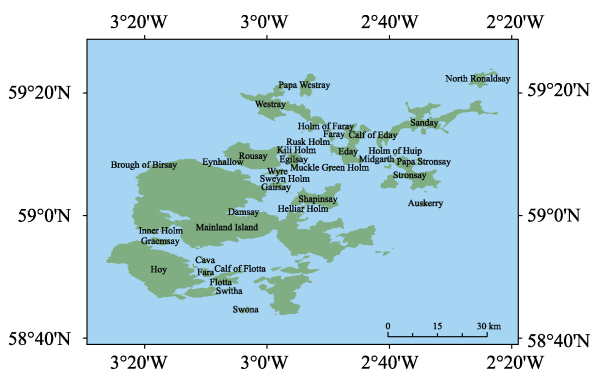


Figure 2 Map of Orkney Islands dataset (.shp format)

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[2] Zhang, Y. H., Liu, C., Shi, R. X. Orkney Islands [DB/OL]. Global Change Research Data Publishing & Repository, 2017. DOI: 10.3974/geodb.2017.01.11.V1.

islands such as Graemsay, Cava, Fara, Calf of Flotta, Switha and Flotta. To the north of Mainland lie Shapinsay, Rousay, Egilsay, Stronsay, Eday, Westray, Papa Westray, Sanday, North Ronaldsay, Gairsay, Wyre, Westray, and several smaller islands. The total area of the British Isles is 1,037.24 km² and the total coastline length of it is 1,076.4 km (Table 1).

Table 1 Geo-location, area and coastline of main islands of the Orkney Islands

Name of island	Geo-location	Center of island	Area (km ²)	Coastline (km)
Mainland Island	58°43'46"N–59°0'16"N, 3°22'5"W–2°42'10"W	58°59'28"N, 3°5'38"W	581.85	368.51
Hoy	58°46'17"N–58°55'57"N, 3°26'12"W–3°7'47"W	58°51'5"N, 3°17'39"W	146.38	95.42
Sanday	59°11'2"N–59°18'48"N, 2°42'6"W–2°23'22"W	59°15'28"N, 2°33'56"W	52.40	106.90
Westray	59°13'39"N–59°21'37"N, 3°4'24"W–2°50'11"W	59°17'46"N, 2°57'38"W	49.15	79.36
Rousay	59°7'35"N–59°12'1"N, 3°7'14"W–2°57'8"W	59°9'38"N, 3°2'13"W	48.07	36.34
Stronsay	59°4'11"N–59°9'45"N, 2°41'27"W–2°31'34"W	59°6'30"N, 2°36'32"W	37.29	65.84
Eday	59°8'16"N–59°15'4"N, 2°49'42"W–2°44'0"W	59°11'20"N, 2°46'30"W	28.91	40.79
Shapinsay	59°1'1"N–59°5'16"N, 2°56'7"W–2°47'53"W	59°2'56"N, 2°51'34"W	28.75	40.37
Flotta	58°48'46"N–58°50'59"N, 3°8'55"W–3°3'50"W	58°49'46"N, 3°6'36"W	10.10	22.85
Papa Westray	59°19'23"N–59°23'11"N, 2°54'41"W–2°52'4"W	59°21'13"N, 2°53'27"W	8.95	19.24
North Ronaldsay	59°20'50"N–59°23'34"N, 2°27'4"W–2°22'11"W	59°22'16"N, 2°25'4"W	8.10	20.45
Egilsay	59°7'26"N–59°10'13"N, 2°56'43"W–2°54'25"W	59°9'5"N, 2°55'35"W	6.35	14.07
Graemsay	58°55'11"N–58°56'28"N, 3°18'54"W–3°15'55"W	58°55'47"N, 3°17'26"W	4.16	9.40
Wyre	59°6'37"N–59°7'40"N, 3°0'48"W–2°57'4"W	59°7'6"N, 2°58'25"W	3.22	9.67
Fara	58°49'58"N–58°51'26"N, 3°10'55"W–3°8'57"W	58°50'37"N, 3°9'58"W	3.06	7.94
Gairsay	59°4'18"N–59°5'31"N, 2°59'37"W–2°56'45"W	59°4'56"N, 2°58'18"W	3.01	10.42
Calf of Eday	59°13'42"N–59°14'53"N, 2°44'52"W–2°43'1"W	59°14'13"N, 2°44'4"W	2.21	7.05
Faray	59°12'6"N–59°13'39"N, 2°49'53"W–2°48'52"W	59°12'52"N, 2°49'26"W	1.58	7.29
Swona	58°44'4"N–58°45'9"N, 3°4'26"W–3°2'59"W	58°44'33"N, 3°3'32"W	1.14	6.09
Auskerry	59°1'29"N–59°2'21"N, 2°34'41"W–2°33'25"W	59°1'54"N, 2°34'11"W	1.07	5.19
Cava	58°52'18"N–58°53'16"N, 3°10'46"W–3°9'23"W	58°52'42"N, 3°10'6"W	0.99	4.95
Papa Stronsay	59°8'47"N–59°9'27"N, 2°36'12"W–2°34'31"W	59°9'6"N, 2°35'12"W	0.94	6.10
Eynhallow	59°8'21"N–59°8'55"N, 3°7'46"W–3°6'35"W	59°8'39"N, 3°7'13"W	0.82	3.81
Switha	58°47'42"N–58°48'15"N, 3°6'48"W–3°5'34"W	58°47'59"N, 3°6'11"W	0.55	3.54

(To be continued on the next page)

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Name of island	Geo-location	Center of island	Area (km ²)	Coastline (km)
Helliar Holm	59°1'6"N–59°1'42"N, 2°54'28"W–2°53'46"W	59°1'24"N, 2°54'4"W	0.47	3.19
Holm of Faray	59°13'45"N–59°14'32"N, 2°50'10"W–2°49'33"W	59°14'5"N, 2°49'50"W	0.44	4.03
Muckle Green Holm	59°7'25"N–59°7'60"N, 2°50'2"W–2°49'28"W	59°7'43"N, 2°49'44"W	0.44	2.74
Holm of Huip	59°9'40"N–59°10'16"N, 2°39'23"W–2°38'45"W	59°9'57"N, 2°39'2"W	0.36	2.65
Holm of Papa	59°20'43"N–59°21'19"N, 2°52'31"W–2°51'47"W	59°21'4"N, 2°52'7"W	0.33	3.03
Damsay	59°0'17"N–59°0'41"N, 3°4'9"W–3°3'28"W	59°0'29"N, 3°3'49"W	0.31	2.38
Holm of Scockness	59°9'45"N–59°10'10"N, 2°57'21"W–2°56'45"W	59°9'58"N, 2°57'4"W	0.28	2.16
Brough of Birsay	59°8'2"N–59°8'18"N, 3°20'28"W–3°19'41"W	59°8'11"N, 3°20'6"W	0.26	2.05
Sweyn Holm	59°5'12"N–59°5'33"N, 2°57'29"W–2°56'48"W	59°5'22"N, 2°57'6"W	0.26	2.17
Calf of Flotta	58°51'6"N–58°51'19"N, 3°4'54"W–3°3'55"W	58°51'12"N, 3°4'25"W	0.23	2.18
Inner Holm	58°57'17"N–58°57'37"N, 3°17'30"W–3°17'10"W	58°57'26"N, 3°17'20"W	0.10	2.05
Midgarth	59°9'21"N–59°9'35"N, 2°41'27"W–2°41'6"W	59°9'27"N, 2°41'18"W	0.08	1.28

The dataset was developed based on the Google Earth and related maps and references^[1–3]. The dataset is consisted of 15 data files and archived in the .kmz and .shp^[4] data formats with the data size of 6.29 MB (Compressed to 2.72 MB in two files).

References

[1] World Map Atlas: United Kingdom Atlas [M]. Beijing: Sino Maps Press, 2007.

[2] Orkney Islands [OL]. Encyclopedia Britannica, Encyclopedia Britannica Inc., 20 Feb., 2019. <https://www.britannica.com/place/Orkney-Islands>.

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Data Computing Environment

[4] ESRI. ArcGIS campus license of Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences.

URL for Data Downloading

<http://www.geodoi.ac.cn/WebEn/doi.aspx?Id=649>.
Or search through: <http://www.geodoi.ac.cn>.