
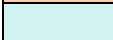







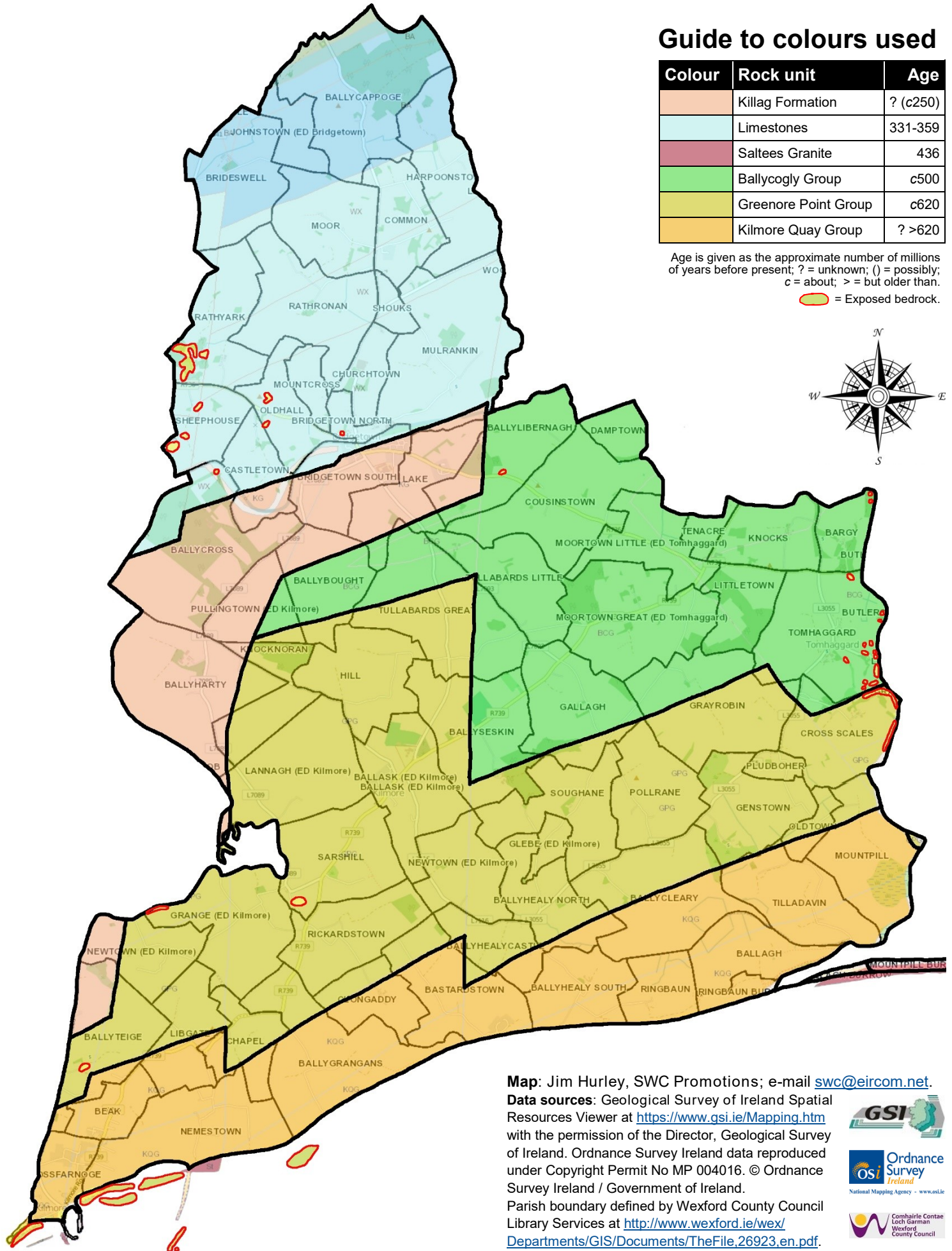
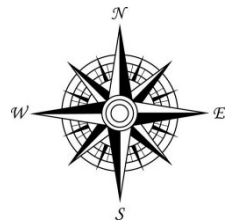
# Bedrock Geology of the Parish of Kilmore

## Guide to colours used

Colour	Rock unit	Age
	Killag Formation	? (c250)
	Limestones	331-359
	Saltees Granite	436
	Ballycogly Group	c500
	Greenore Point Group	c620
	Kilmore Quay Group	? >620

Age is given as the approximate number of millions of years before present; ? = unknown; () = possibly; c = about; > = but older than.

 = Exposed bedrock.



**Map:** Jim Hurley, SWC Promotions; e-mail [swc@eircom.net](mailto:swc@eircom.net).

**Data sources:** Geological Survey of Ireland Spatial Resources Viewer at <https://www.gsi.ie/Mapping.htm> with the permission of the Director, Geological Survey of Ireland. Ordnance Survey Ireland data reproduced under Copyright Permit No MP 004016. © Ordnance Survey Ireland / Government of Ireland.

Parish boundary defined by Wexford County Council Library Services at <http://www.wexford.ie/wex/Departments/GIS/Documents/TheFile.26923.en.pdf>.



# Classification of rocks

The rocks that make up Earth's outer crust are classified into three types according to the way in which they were formed: (1) **igneous rocks** are rocks that formed from molten material that cooled and solidified, (2) **sedimentary rocks** formed from sediment, that is, eroded particles of pre-existing weathered rock, and (3) **metamorphic rocks** are changed rocks that were originally igneous rocks, sedimentary rocks or pre-existing metamorphic rocks.

Rock unit		Rock types present (Source: <a href="https://www.gsi.ie/Mapping.htm">https://www.gsi.ie/Mapping.htm</a> )	Seen	Age
Killag Formation		<b>Coarse conglomerates, siltstones and sandstones.</b> These are all red sedimentary rocks derived from sediments varying in size from fine silt to sand to coarse gravel. The sandstones are derived from semi-arid desert sand while siltstones are derived from silt. Conglomerates are coarse, pebbly rocks derived from rounded gravel and stones.	Nowhere. No exposures. Known from boreholes only.	? (c250)
Limestones	Wexford Formation	<b>Pale grey limestones, often dolomitised.</b> Limestone is a sedimentary rock rich in lime. The pale grey, fossil-poor limestones of the Wexford Formation are the uppermost and youngest rocks in the group. Limestone and dolomite are both carbonate minerals. Limestone is calcium carbonate; dolomite is calcium carbonate with added magnesium. Limestone is said to be dolomitised when it has an elevated magnesium content.	Flooded quarries at Rathyark.	331-359
	Ballysteen Formation	<b>Dolomitised dark-grey muddy limestone.</b> The dark-grey, fossil-rich muddy limestones of the Ballysteen Formation are the rocks that are extensively exposed around the lighthouse at Hook Head. Limestone and dolomite are both carbonate minerals. Limestone is calcium carbonate; dolomite is calcium carbonate with added magnesium. Limestone is said to be dolomitised when it has an elevated magnesium content.	Nowhere. No exposures. Known from boreholes only.	
	Ballymartin Formation	<b>Limestone and dark-grey calcareous shale.</b> Shale is a sedimentary rock made up of clay particles; it typically breaks into thin flat pieces. Calcareous means containing a lot of lime. The limestones and dark grey, limy shales of the Ballymartin Formation represent sediments laid down in shallow, muddy, marine shelf conditions.	Nowhere. No exposures. Known from boreholes only.	
	Portersgate Formation	<b>Sandstone, shale and thin limestone.</b> The Portersgate Formation represents the base of the group and marks the transition from the desert conditions that prevailed on land during the Devonian period to the shallow-water, marine conditions that prevailed during the early Carboniferous period as the Carboniferous Sea flooded northwards across Ireland. The main rock types present are sandstone, shale and thin limestone. Sandstone is a sedimentary rock made of wave-worked sand grains cemented together. Shale is a sedimentary rock made up of clay particles and typically breaking into thin, flat pieces. Limestone is a sedimentary rock rich in lime.	Nowhere. No exposures. Known from boreholes only.	
Saltees Granite		<b>Foliated granite with xenoliths.</b> Granite is an igneous rock. The Saltees Granite is a pinkish-brown, medium-grained rock derived from molten material that welled up and cooled under the folds of the former Caledonian Mountains. The molten material solidified rather quickly resulting in the crystals that grew in it being quite small. The crystals also have a sheet-like, layered structure or foliation due to being subjected to sheering forces as they grew. Xenoliths are lumps of the former Caledonian Mountains that fell into, and got trapped in, the molten material as it welled up in chambers below the mountain folds. The xenoliths survived in the molten material without melting.	Saltee Island Great.	436
Ballycogly Group		<b>Mylonites with metasedimentary enclaves.</b> Ballycogly Group rocks were originally sedimentary rocks derived from river-borne sediments deposited offshore in an underwater trench. These original sedimentary rocks were later subjected to crushing, grinding and milling forces resulting in they being turned into very fine-grained, pale green, banded metamorphic rock types called mylonites. A metasedimentary enclave is a group of sedimentary rocks that has been changed into metamorphic rocks in such a way that the group differs in character from the rocks surrounding it.	Valley of the Bargy stream, Tomhaggard.	c500
Greenore Point Group		<b>Foliated amphibolites with minor schists.</b> Greenore Point Group rocks are believed to be younger than Kilmore Quay Group rocks and to be igneous rocks derived from molten material rather than from sediments. Amphibolites are rocks rich in minerals from a family of minerals called amphiboles. After they were formed, the original igneous rocks were subjected to intense sheering forces that changed them into metamorphic rocks. Foliation means having a layered, sheeted or banded structure, in this case due to the sheering forces. When a rock is strongly foliated, is rich in tiny plates of the shiny, silvery mineral mica and can be split into thin, irregular plates it is known as schist. Dark green, finely foliated amphibolites are the main rock type in the unit; schists are a minor rock type.	Boundary walls at the former Keating's quarry, Sarshill.	c620
Kilmore Quay Group		<b>Banded quartzo-feldspathic paragneisses.</b> Kilmore Quay Group rocks were originally sedimentary rocks derived from sandy and muddy sediments laid down underwater off the coast of the former microcontinent Avalonia over 620 million years ago. These original sedimentary rocks were later subjected to deep burial in Earth's crust where they were subjected to high temperatures and high pressures that modified, altered and changed them into metamorphic rocks. The parent sedimentary rocks were changed into a banded, coarse-grained metamorphic rock type called gneiss. To indicate their origin, gneisses derived from sedimentary rocks are known as paragneisses. The bands in gneiss represent layers and lenses of different minerals notable the minerals quartz and feldspar that separated out during melting.	Forlorn Point, Crossfarnoge and Nemestown.	? >620