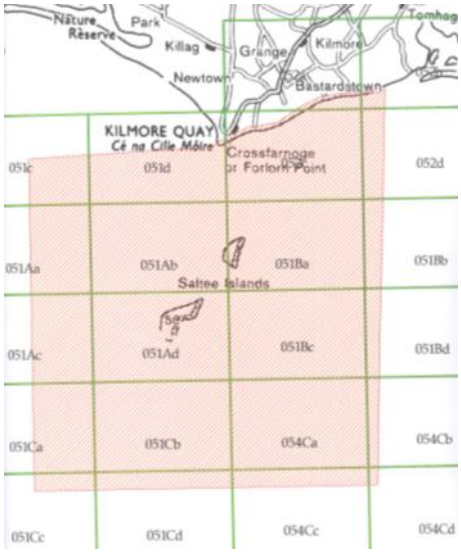
The Reef at Forlorn Point

An information sheet compiled, produced and distributed by Jim Hurley, SWC Promotions. 'Phone: (053) 912 9671. E-mail: swc@eircom.net Updated June 2006

What is a reef?

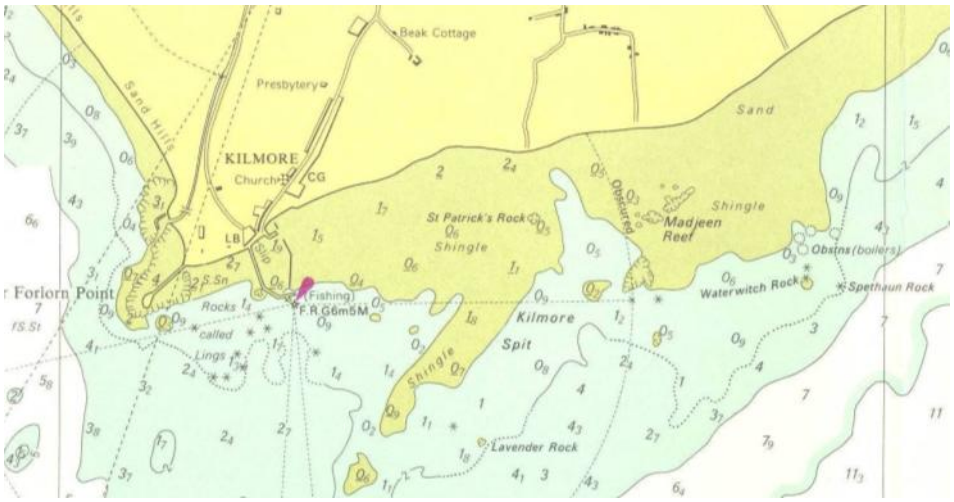
A reef is a wildlife habitat composed of exposed bedrock or loose rocks. About 40% of the 15 809ha Saltee Islands EU Site of Community Importance (SCI) and candidate Special Area of Conservation (cSAC) (map below) is classified as reef. Most of the reef is permanently under water. However, some of it is exposed on the mainland shore when the tide ebbs.

Excellent examples of mainland reef habitats may be seen at Forlorn Point, on the shore at Nemestown, on St Patrick's Bridge, at Madjeen Reef, and on the glacial erratics found along the shore extending to Ballyhealy and Ringbaun. The seashore is a protected area to conserve the marine life that lives there.



For further information about the Saltee Islands cSAC, its reefs and wildlife see the website of the National Parks and Wildlife Service at www.npws.ie/en. Path: Conservation Sites / SACs / Site Synopsis / Wexford / Saltee Islands (000707).

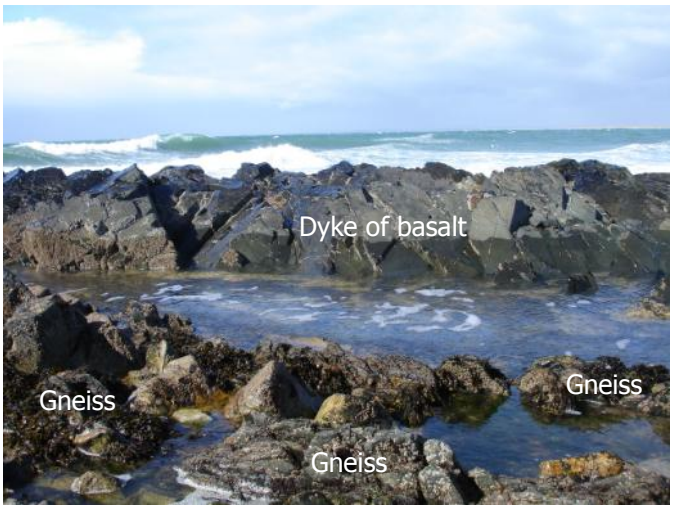
Excellent examples of reef habitats occur on the seashores east of Kilmore Quay



The shoreline around Kilmore Quay is part of a south-facing, open coast. The prevailing wind is south-westerly and is, therefore, on-shore. However, exposure is moderate. The nearshore waters are relatively shallow. The fetch is extensive but the relative shallowness of the nearshore waters, and presence of the Saltee Islands and associated reefs as obstructions, significantly reduce exposure and the impacts of oceanic swells and storm surges. The coast is formed of exposed bedrock littered with sediments ranging from very large boulders to mud.

Nice rock!

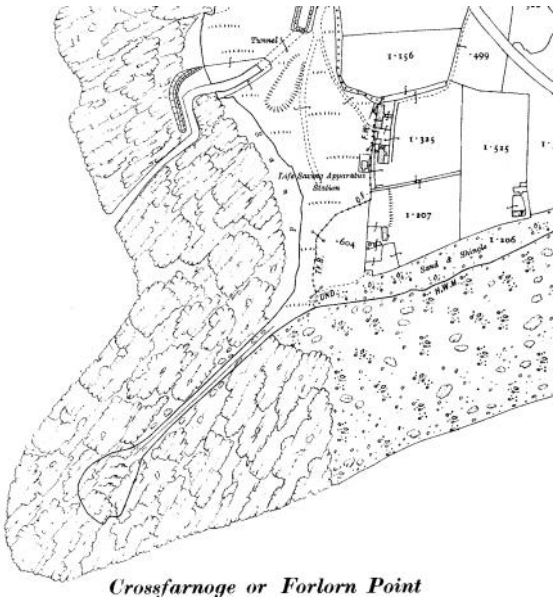
The exposed bedrock at Forlorn Point is gneiss (pronounced 'nice'). Gneiss is a German word for 'banded rock'. The oldest gneiss in Kilmore Quay is believed to date from the Precambrian Period of geological time and to be about 600 million years old. Several dykes of dark, fine basalt run through the gneisses.



What's in a name?

The placename 'Forlorn' is interpreted as an anglicization of 'Furloan', a word from Yola, the dialect of English spoken in the South Wexford baronies of Forth and Bargy from the time of the Anglo-Norman invasion to the middle of the nineteenth century. In Yola, 'furloan' meant a 'foreland' or 'the farthest land' (*Poole's Glossary*, p 24).

Long-time residents in Kilmore Quay still refer to the headland in a geographically descriptive way as 'The Forlorn' (the foreland) rather than using the official Ordnance Survey rendering 'Forlorn Point'.



Zonation

Rocky seashores are divided into five zones or bands. These horizontal bands lie more or less parallel with the breaking waves. There are three main bands and these are covered and uncovered by tides for varying times depending on height above sea level. In addition, there are two secondary bands: marginal or fringe zones at both the uppermost and lowermost limits of the three main height bands. These two fringe zones are rarely covered/uncovered by tides (see table on right).

Zonation at Forlorn Point is made complex by the uneven slope and shape of the surface, the variation in exposure to wave action, and the presence of a diversity of shore features such as different rock types, rock pools of varying sizes and depths, gullies that are wet, dry, sheltered and exposed, boulders with overhangs and crevices, cobbles, small patches of sand, and the tall dykes of basalt that cut across the gneisses that compose most of the reef.

In general, shore zonation is best indicated in the field by (1) the relative positions of bands of lichens, kelps, barnacles, and wracks, and (2) the combination of species present at any shore level.

Habitats and Biotopes

A **habitat** is a place where plants and animals live. A rocky seashore is a habitat. The rocky seashore habitat type is subdivided on the basis of its energy status. High energy shores are exposed to strong wave action and/or tide-swept conditions. Forlorn Point has exposed, high energy areas near the tip of the headland. These areas are subject to strong wave action and tide and sand scour. Away from the exposed tip, both moderately exposed and sheltered, low energy areas may be found. The existence of these differing physical environments is reflected in the field by the different communities of plants and animals that inhabit them.

A **biotope** is a part of a habitat associated with a distinctive assemblage of conspicuous species. The word originated in Germany in the 1920s and is used to identify subdivisions of habitat types. For example, much of the exposed, high energy, lower middle shore and upper lower shore near the tip of Forlorn Point is dominated by a large bed of Common Mussel with associated barnacles. This particular mussel/barnacle community comprises a biotope complex that is very obvious in the field. At its edges the biotope complex grades into neighbouring less exposed biotopes dominated by barnacles only and biotopes dominated by robust growths of brown seaweeds.

The rocky seashore habitat type at Forlorn Point is, therefore, a mosaic of biotopes spread across the three broad shore zones.

Splash Zone	Technically, the splash zone is not part of the seashore as it is never covered by the tide. However, it is subject to splashes and drenching with spray during storms at high water of spring tides. It is exposed to the air for nearly all of the time. The splash zone is wider and better developed on the parts of the shore that are more exposed to strong wind and wave action. An excellent example of splash zone occurs at Forlorn Point. Typical splash zone plants and animals include Sea Ivory, Black Shields, Orange Lichen, Black Lichen, Pale Cushion-moss, Dark Cushion-moss, Curled Dock, Common Mouse-ear, Rock Sea-spurrey, Danish Scurvygrass, Sea-milkwort, Western Clover, Common Bird's-foot-trefoil, Thrift, Buck's-horn Plantain, Sea Mayweed, Red Fescue, Sand Couch, Creeping Bent, Sea Slater and Bristletail under stones, *Anurida* in pools, Small Winkle in crevices, Brown Rat and scavenging Red Fox.
Upper Shore	The upper shore is covered by spring tides only; it is exposed to the air for much of the time. Consequently, it is subject to intense light, constant wetting by rain, drying winds, freezing air temperatures in winter, and hot sun in summer. The lichen zone marks the boundary between the upper shore and the splash zone. Typical upper shore plants and animals include *Cladophora*, Sea Lettuce, Gut Laver, Channelled Wrack, Flat Wrack, Shore Crab, Common Limpet and Rough Winkle.
Middle Shore	The middle shore is covered by most tides and is exposed to the air for about half of the time. It is a wide zone and is defined by the upper and lower limits of neap tides. An imaginary line running across the centre of the middle shore represents mean 'sea level'. In the field, 'the barnacle line' — the boundary between the upper limit of Acorn Barnacles and the lower limit of Black Lichen — marks the boundary between the middle shore and the upper shore. Typical middle shore plants and animals include Black Tufted Lichen, Velvet Horn, Bladder Wrack, Knotted Wrack, Flat Wrack, Forked Rubberweed, *Polysiphonia*, Coralweed, Beadlet Anemone, Scaleworms, Red-threads, Acorn Barnacles, Common Hatchet Shell, Periwinkle, Dog Whelk, and Common Mussel.
Lower Shore	The lower shore is covered by the tide all of the time except during low water of spring tides so it is seldom exposed to the air. The boundary between the lower shore and the middle shore is indicated by the upper limit of Toothed Wrack. Typical lower shore plants and animals include Toothed Wrack, Carrageen, Pink Encrusting Weed, Wormweed, Red Rags, Dulse, red seaweeds, Breadcrumb Sponge, Strawberry Anemone, several hydroids, Tube Worm, Sea Mat, Common Hermit Crab, Edible Crab, Common Chiton, Grey Top Shell, Flat Winkle, sea slugs, Common Cushion Star, sea squirts, Shore Rockling, Worm Pipefish, Butterfish, and Shanny.
Sub-littoral Fringe	The lower limit of the lower shore is defined by the uppermost extent of kelps. During extreme low water of spring tides the sublittoral fringe is exposed. This transitional zone is technically not part of shore as it is the margin of what is truly marine. Depending on atmospheric pressure and sea conditions, glimpses of the sublittoral fringe at Forlorn Point may be got twice each month when this area is exposed briefly. Tide tables give the predicted date, time and extent of exposure but, in general, some of the fringe is always exposed at 1-2pm for a day or two around the date of both the New Moon and the Full Moon. Typical plants and animals of the sublittoral fringe include Tangle, Sea-belt, sponges, sea slugs, hydroids, and fish.

Suggested further reading

Connor, D. W., Allen, J. H., Golding, N., Howell, K. L., Lieberknecht, L. M., Northen, K. O., and Reker, J. B. 2004. *The Marine Habitat Classification for Britain and Ireland*. Version 04.05. Peterborough: Joint Nature Conservation Committee. The Internet version may be accessed at www.jncc.gov.uk/MarineHabitatClassification.

Hayward, P., Nelson-Smith, T., and Shields, C. 1996. *Sea Shore of Britain and Europe*. Collins Pocket Guide series. London: HarperCollins*Publishers* Ltd.