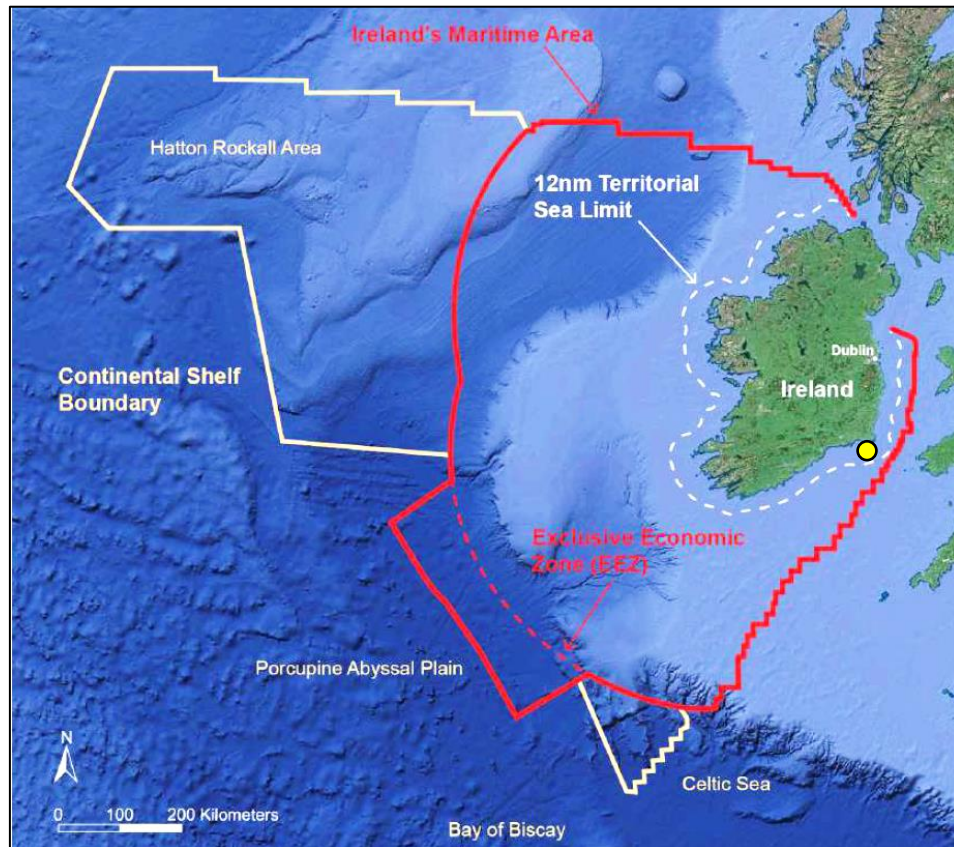

Proposed South Wexford Coast Marine Protected Area

-o0o-



— Proposal dated Monday 26 July 2021 —

Proposal compiled by Jim Hurley

SWC Promotions

Grange, Kilmore, Co Wexford Y35 YN35

Mobile: 086 163 7199

Email: southwexfordcoast@gmail.com

Website: www.southwexfordcoast.com

SWC Promotions: *promoting the natural heritage resource values of the South Wexford Coast.*



The following operational definition of a Marine Protected Area (MPA) is proposed for MPAs in Ireland.

“A geographically defined area of marine character or influence which is protected through legal means for the purpose of conservation of specified species, habitats or ecosystems and their associated ecosystem services and cultural values, and managed with the intention of achieving stated objectives over the long term.”

(Source: MPA, 2020 page ix)

Front cover image: Map showing the limits of Ireland's maritime jurisdictional zones and the boundary of Ireland's maritime area. Cream lines indicate boundaries of Ireland's claimed extended continental shelf area. The superimposed circle with the yellow fill indicates the indicative location of the proposed South Wexford Coast Marine Protected Area in the national context.

(Map source: MPA, 2020 page 56 (PDF) / page 38 (hard copy), Figure1.8)

Proposed South Wexford Coast MPA

Proposal. It is proposed that the South Wexford Coast (SWC) be considered an area appropriate for designation a Marine Protected Area (MPA). The proposal is made in response to the government's public invitation "*to provide comments and make submissions on the MPA Advisory Group's report*" regarding the proposed expansion of Ireland's existing network of MPAs (MPA, 2020).

Geographically defined area. Figure 1 below shows the indicative spatial extent of the proposed South Wexford Coast Marine Protected Area (pSWCMPA). From Hook Head, the northern boundary of the proposed MPA extends eastwards around the landward limits of the existing Natura 2000 sites (see Table 1 below) and otherwise along the high water mark on the foreshore to Carnsore Point. The southern boundary is the 12-nautical-mile territorial sea limit. The eastern boundary extends from Carnsore Point to the southern-eastern corner of the Carnsore Point SAC and from there due south to the 12-mile limit. The western boundary extends from Hook Head due west to the western boundary of the Hook Head SAC, south-west along that boundary to its southern limit, and from there, due south to the 12-mile limit.

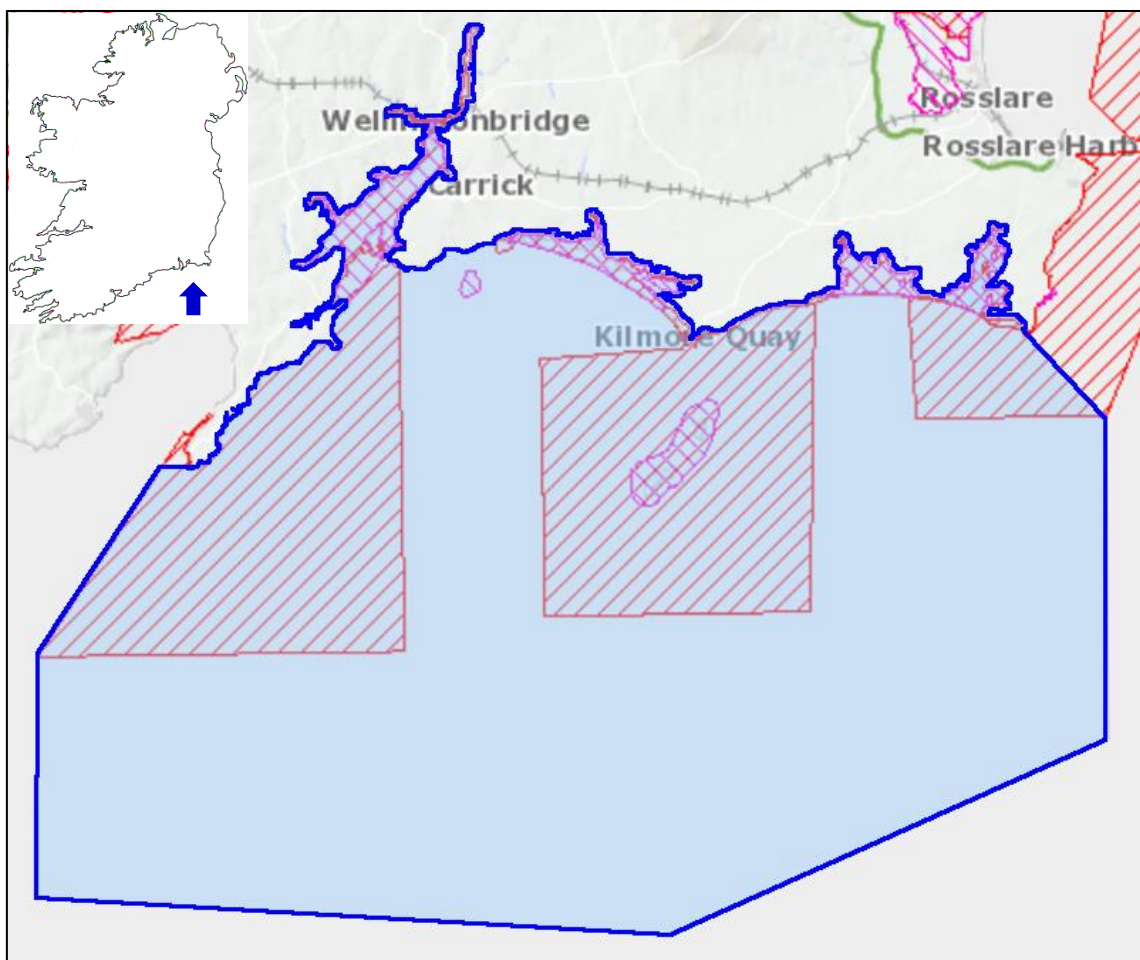


Figure 1. The proposed South Wexford Coast Marine Protected Area (blue fill).

(Base map source:
<https://dahq.maps.arcgis.com/apps/webappviewer/index.html?id=8f7060450de3485fa1c1085536d477ba>. Ordnance Survey Ireland Permit No MP 0002120.
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Justification and aims. This proposal regarding the suggested designation of the South Wexford Coast a Marine Protected Area is considered reasonable due to the in-combination interaction of the many elements and attributes of the coastal zone in question that give rise to a whole that is synergistically greater than the sum of its constituent parts. Justification for the proposal is five-fold as listed below together with the stated aim that each of these elements seeks to achieve. The overall, long term objective that the proposal aims to achieve is good environmental status of the marine waters and favourable conservation status of their natural heritage resource values, in tandem with a sustainable lifestyle for the people who live and work on the South Wexford Coast by adopting an area-based, whole-site management approach.

1. **Consolidation of existing MPAs.** The South Wexford Coast supports an existing cluster of sixteen (eight double-badged) MPAs (7 SACs, 6 SPAs, 1 Ramsar site, 1 Nature Reserve and 1 Refuge for Fauna). All of these existing sites are areas of marine character or influence and all either adjoin each other or are joined together by the inshore waters of the Celtic Sea. For management purposes, the proposal seeks to consolidate the existing cluster of sixteen smaller sites into a single, larger, geographically defined area: the South Wexford Coast MPA. The aim of this element is to unite existing species-based and habitat-based nature conservation sites in a broader, area-based initiative. For further detail see Appendix 1 below.
2. **Habitat conservation.** The South Wexford Coast supports an excellent range of the marine and coastal habitats found in Ireland including two priority habitat types. There are exceptionally good examples of reefs, lagoons, saltmarshes and sand dunes including habitats and species found nowhere else in the country. Furthermore, these habitats and species occur in a unique context nationally. Considering their exceptional quality, this element of the proposal seeks to enhance and expand the existing conservation measures that these habitats and species currently enjoy. For further detail see Appendix 2 below.
3. **Seabird conservation.** Three sites on the South Wexford Coast are designated for the conservation of 15 species of seabird. Each of these three sites is either of national or of international importance. The sites seek to protect the birds while they are breeding but they are limited in their protection of the sea areas in which the birds forage and feed. This element of the proposal seeks to conserve specified species by increasing the spatial extent of the protected area that seabirds have to forage and feed in. For further detail see Appendix 3 below.
4. **Grey Seal conservation.** The Grey Seal is an Annex 2 species requiring protection. The Saltee Islands Special Area of Conservation (SAC) is the only site in south-east Ireland designated for the conservation of Grey Seals. As with seabirds, this element of the proposal seeks to conserve specified species by increasing the spatial extent of the protected area that the seals have to forage and feed in. For further detail see Appendix 4 below.
5. **Associated ecosystem services.** The South Wexford Coast has a wealth of other attributes, provides ecosystem services, most significantly via the commercial fishing port at Kilmore Quay but also via eco-tourism, and has associated cultural values. Advancement of the proposed MPA would be beneficial not only for marine nature conservation, but for achieving a sustainable blue economy, and realising the objectives of the European Green Deal in south Wexford for fisheries, aquaculture, coastal tourism, and related maritime activities, thereby tackling the climate and biodiversity crises and creating new green jobs. For further detail see Appendix 5 below.

Conclusion. The proposed South Wexford Coast Marine Protected Area meets the OSPAR attributes and ecological criteria used for site selection in current practice: biological diversity, representativity, and naturalness (MPA, 2021 page 118, Table 3.1). It also meets the Convention on Biological Diversity additional criterion of ‘uniqueness or rarity’ (*ibid.*, page 119). The proposed South Wexford Coast Marine Protected Area is a geographically defined area of marine character or influence for the purpose of conservation of specified species, habitats or ecosystems and their associated ecosystem services and cultural values. Advancement of the proposed MPA is seen as beneficial not only for marine nature conservation, but for achieving a sustainable blue economy on the South Wexford Coast by creating a discrete, area-based management unit with a legal status and a management plan with the intention of achieving stated objectives over the long term.

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Appendices

1 CONSOLIDATION OF EXISTING MPAS

It is recommended by the expert advisory group that Ireland's expanded network of MPAs could include existing Natura 2000 sites, Ramsar sites, statutory nature reserves and Refuges for Fauna with a marine area (MPA, 2020 page 191, Figure 3.4). The

Natura 2000 site	Type and code	
	SPA	SAC
1 Hook Head	-	IE000764
2 Bannow Bay	IE004033	IE000697
3 Keeragh Islands	IE004118	-
4 Ballyteige Burrow	IE004020	IE000696
5 Saltee Islands	IE004002	IE000707
6 Tacumshin Lake	IE004092	IE000709
7 Lady's Island Lake	IE004009	IE000704
8 Carnsore Point	-	IE002269

Table 1. Existing Natura 2000 sites.

same source goes on to recommend: "Ireland's expanded network of MPAs should include existing and new Natura 2000 and Ramsar sites, newly designated MPAs with conservation as their primary objective and OECMs that meet criteria for appropriate designation and inclusion" (MPA, 2020, Recommendation 3.66, pages 210 (192) and 217 (199)).

The South Wexford Coast supports eight existing Natura 2000 sites with marine components (Table 1 and Figure 2) (<https://www.npws.ie/protected-sites>), an existing Ramsar site with a marine area (Bannow Bay; MPA, 2020, page 254 (236), Table 4.2, Site No 840), an existing nature reserve with a marine area (Ballyteige Burrow; MPA, 2020, page 82 (64), Table 1.5), and an existing seabird Refuge for Fauna (Lady's Island Lake; MPA 2020, page 82 (64), Table 1.6).

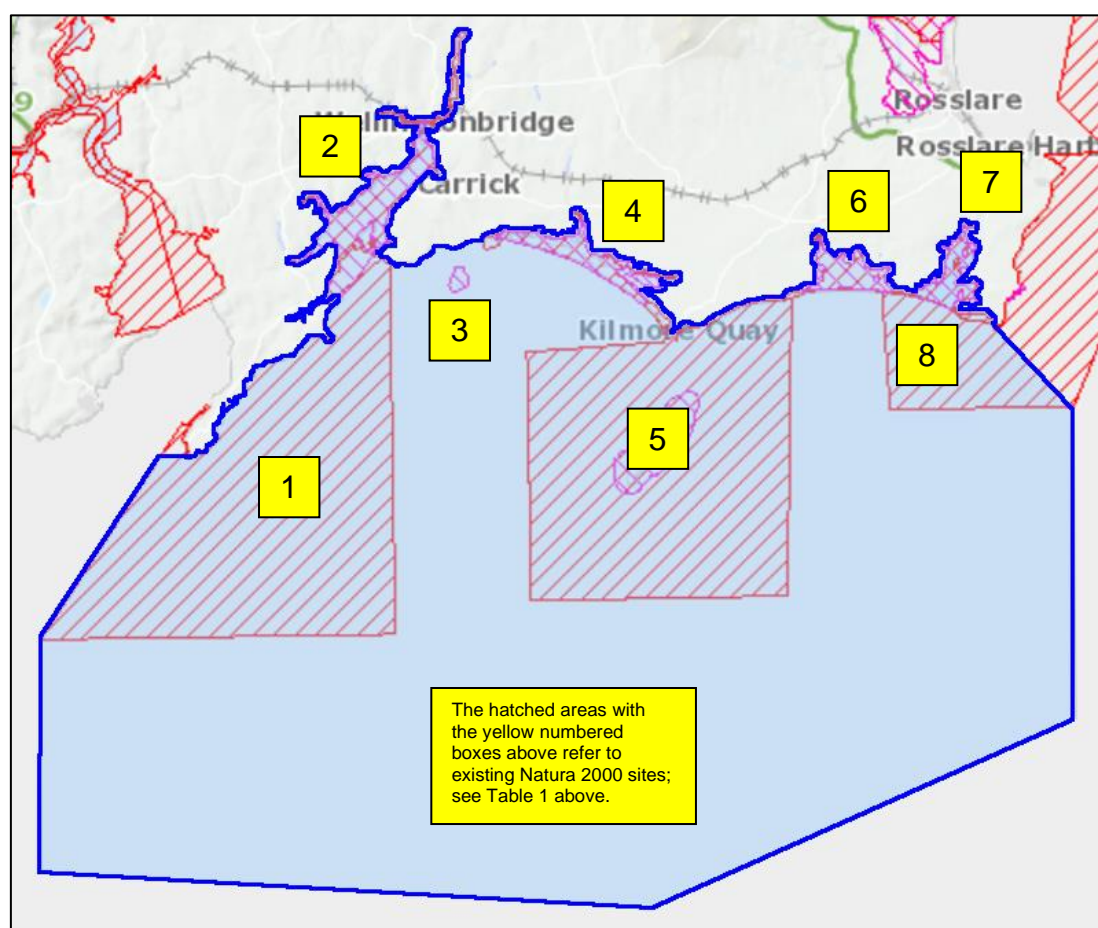


Figure 2. The proposed South Wexford Coast Marine Protected Area (blue fill).

(Base map source: as Figure 1)

The eight existing Natura 2000 sites consist of seven Special Areas of Conservation (SACs) and six Special Protection Areas (SPAs) with, in five cases, the SPAs and SACs overlapping to varying extents (Table 1). The eight Natura 2000 sites, the Ramsar site at Bannow Bay, the statutory nature reserve at Ballyteige Burrow, and the Refuge for Fauna at Lady's Island Lake, form a discrete cluster both geographically and biologically due to their location in two adjoining sediment compartments: the western, more enclosed and well-defined Ballyteige Bay sediment cell, and the eastern, more open and less well-defined Ballyhealy embayment sediment cell. The two sediment cells are contained between the three rocky groynes of the Hook peninsula in the west, the Forlorn Point / St Patrick's Bridge / Saltee Islands complex centrally, and Carnsore Point headland in the east (Figure 3).

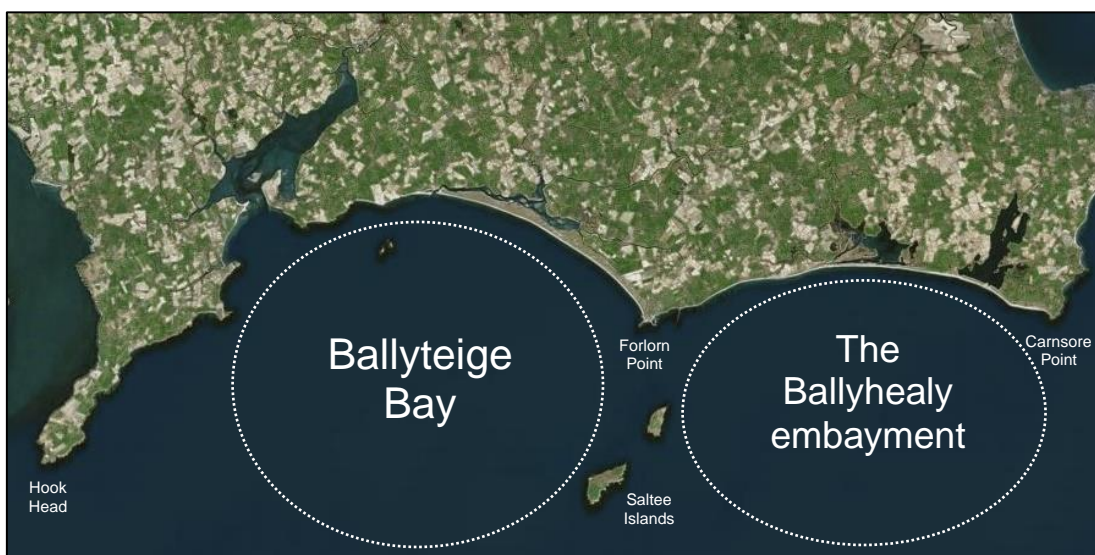


Figure 3. The two sediments cells on the South Wexford Coast.

(Image source: <https://www.bing.com/maps/aerial>)

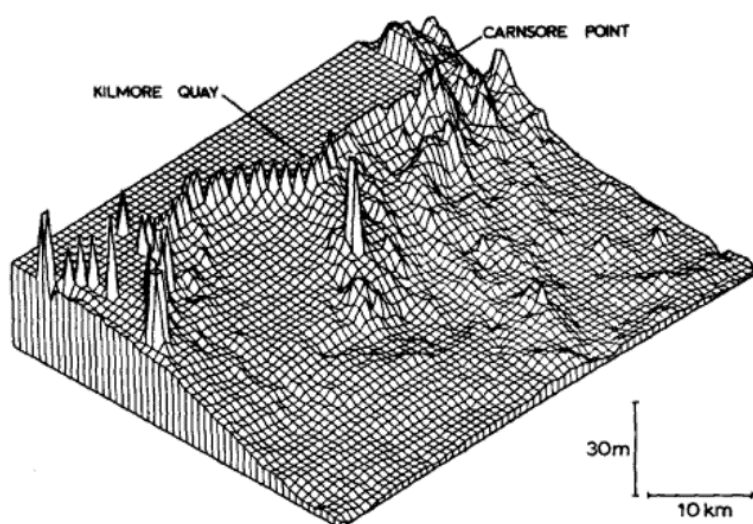


Fig. 3. Bathymetric representation of the shelf off the south coast of Wexford, viewed from the S.W. Vertical exaggeration x 100, plotted on a Calcomp 565 using GINO graphics software. The mainland is reduced to O.D.

Figure 4. Bathymetry of the two sediments cells on the South Wexford Coast.

(Source: Lowry and Carter, 1982 page125, Figure 3)

On the South Wexford Coast, all of the shorelines of the offshore islands, islets and sea rocks, are in Natura 2000 sites together with the mainland shoreline from Hook Head to Carnsore Point with the exception of the following three areas: (1) the coastal stretch south of Bannow Church (340m long approximately); (2) from Clammers Point to Cullenstown Strand (5km long approximately), and (3) the western side of Forlorn Point (230m long approximately) (Figure 5 and Figure 6).

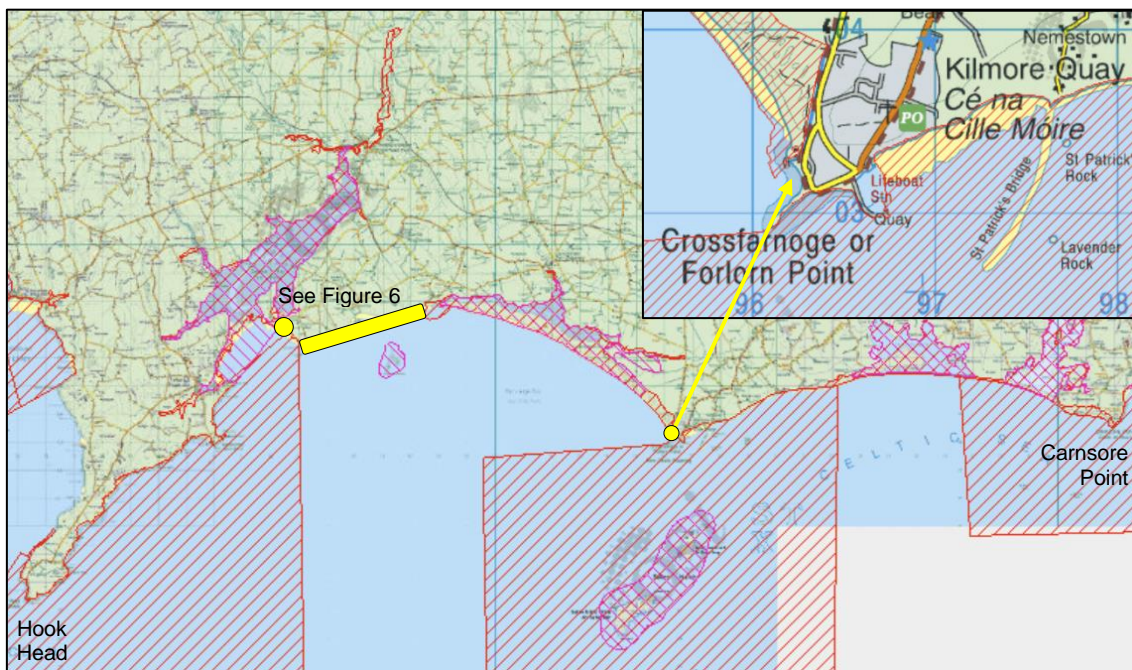


Figure 5. The South Wexford Coast shoreline with Forlorn Point inset.

(Source: <https://dahg.maps.arcgis.com/apps/webappviewer/index.html?id=8f7060450de3485fa1c1085536d477ba>. Ordnance Survey Ireland Permit No MP 0002120. © Ordnance Survey Ireland/Government of Ireland)



Figure 6. Bannow to Cullenstown shoreline.

(Source: <https://dahg.maps.arcgis.com/apps/webappviewer/index.html?id=8f7060450de3485fa1c1085536d477ba>. Ordnance Survey Ireland Permit No MP 0002120. © Ordnance Survey Ireland/Government of Ireland)

The existing MPAs on the South Wexford Coast comprise three adjoining but separated components: (A) a western component comprising Hook Head and Bannow Bay that are joined together, (B) a central component comprising the stand-alone, tiny Keeragh Islands, and (C) an eastern component comprising the five remaining sites (Ballyteige Burrow, Saltee Islands, Tacumshin Lake, Lady's Island Lake, and Carnsore Point) that are all joined to each other (Figure 7).

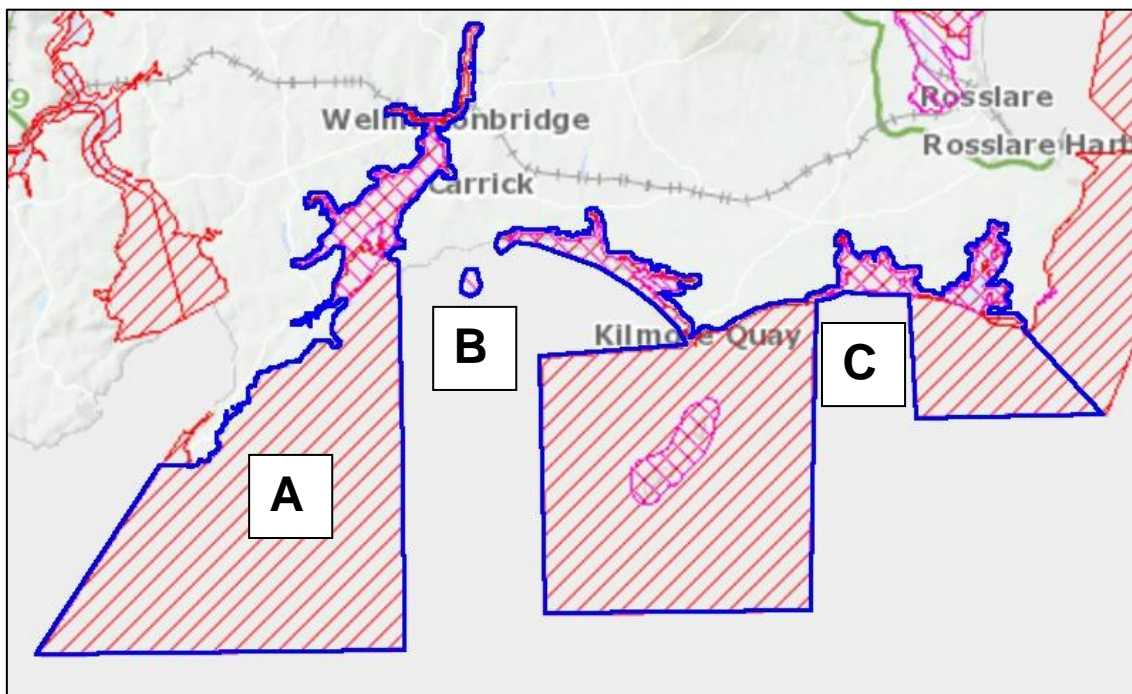


Figure 7. Existing MPAs on the South Wexford Coast. (Source: as Figure 1)

This element of the proposal consolidates the three adjoining but separated components (Figure 7) into a discrete area (Figure 8). The proposed South Wexford Coast Marine Protected Area comprises two units: the northern 'consolidated cluster' of existing MPAs, and the southern 'open sea' area fringing the 12-mile limit.

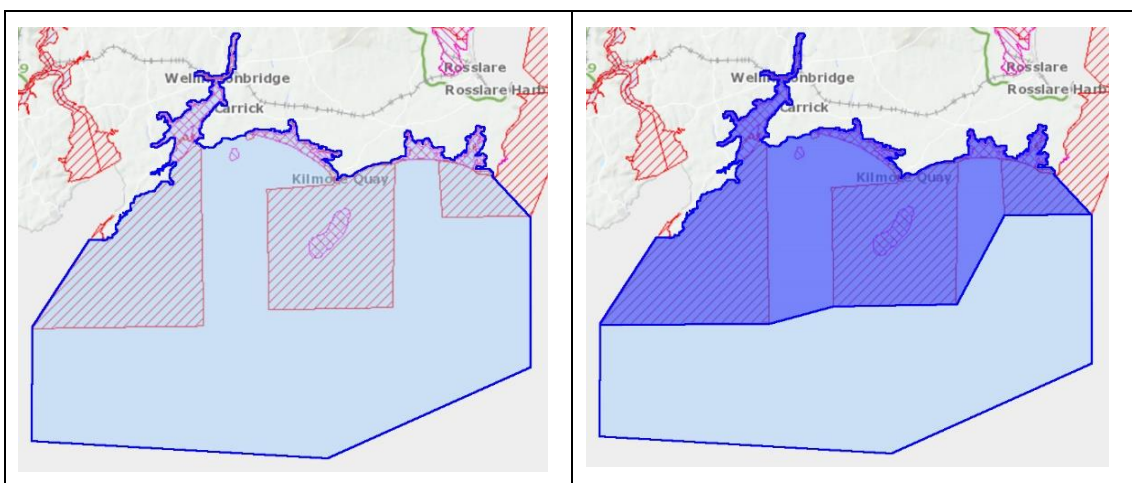


Figure 8. Proposed MPA (left; light blue fill) with the consolidated cluster of existing MPA (right; darker blue fill).

(Source: as Figure 1)

2 HABITAT CONSERVATION

Of the seven Annex I habitats regarded as 'marine' in the Natura 2000 reporting guidelines (MPA, 2020, page 64 (46), Table 1.2), five occur on the South Wexford Coast (Figure 9).

The two not represented are 1110 'Sandbanks which are slightly covered by sea water all the time' and 1180 'Submarine structures made by leaking gases'. The latter is very rare as it occurs at only one site in Ireland: the Codling Fault Zone SAC No IE0003015 located within the Irish Sea around 24km east of Howth Head, Co Dublin, while the former habitat type is rare as it is found at only four sites nationally.

Code	Name	Example
1130	Estuaries	Bannow Bay and The Cull
1140	Mudflats and sandflats not covered by seawater at low tide	Bannow Bay, The Cull, Saltee Islands, and Carnsore Point
1160	Large shallow inlets and bays	Ballyteige Bay
1170	Reefs	Hook Head, Saltee Islands, and Carnsore Point
8330	Submerged or partially submerged sea caves	Saltee Islands

Figure 9. Marine habitats represented on the South Wexford Coast.

In addition to the marine habitats tabulated above (Figure 9), there are other Annex I habitats within coastal systems, such as lagoons, saltmarshes, and sand dunes that are shaped by marine influences. Some of the habitat types found on the South Wexford Coast are of exceptional value and/or are of national significance. These are outlined below.



Figure 10. Sea caves at Saltee Island Great.

(Photo: Jim Hurley)



2.1 Reefs

Reefs are very well represented on the South Wexford Coast. At the western extremity of the site: *“The waters off Hook Head are rich in marine life ... Rock pools on the shore support a diverse flora and fauna.”*

(<https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY000764.pdf>).

Regarding Carnsore Point at the eastern extremity: *“The site is of considerable conservation significance”* (<https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY002269.pdf>). The subtidal reefs around the centrally-placed Saltee Islands range from rugged bedrock with steep sided gullies to large boulders mixed with sand or cobbles and pebbles and are rated exceptional in a national context. *“This site is of high conservation importance for the occurrence of several habitats which are listed on Annex I of the E.U. Habitats Directive, of which the reefs are of exceptional quality and diversity.”* Furthermore *“The communities present are excellent examples of those typical of tide-swept areas and many have fauna and flora that are tolerant of sand scour. The area is notable for the range of colonial sea squirts present. With the exception of only a few samples, the communities are very species rich, with samples taken during the BioMar Survey having from 78 to 117 species. No other area surveyed during the BioMar Survey had so many species rich communities.”*

(<https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY000707.pdf>).



Figure 11. A seagrass meadow of Eelgrass (*Zostera marina*), a blue carbon habitat on an intertidal reef in the Saltee Islands SAC, exposed at low tide by St Patrick's Rock, Nemestown, with the Madjeen Reef in the distant background.

(Photo: Jim Hurley)

2.2 Lagoons

Coastal lagoons are Annex I priority habitats within coastal systems that are shaped by marine influences. While they are regarded as marine habitats, for reporting purposes they are classified as terrestrial habitat under Article 17 of the Habitats Directive (MPA, 2020 pages 63 (45) and 64 (46)). The three lagoons on the South Wexford Coast (Lady's Island Lake, Tacumshin Lake and the Ballyteige Channels) are significant in a national context for the following three reasons.

Though drained in summer, Tacumshin Lake with an area of 430ha is the largest lagoon in Ireland (<http://www.irishlagoons.com/wexford/>). *"The site is of particular conservation significance ... an excellent example of a sedimentary lagoon. ... The presence of a number of rare or scarce plant species adds additional interest to the site."* (<https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY000709.pdf>).

Lady's Island Lake is regarded *"an excellent example of a sedimentary lagoon" ... "by far the best example of this type of lagoon in the country" ... "At least 13 lagoonal specialist species have been recorded which is the highest number for any lagoonal habitat in the country" ... "This site is of high conservation importance"* (<https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY000704.pdf>).

In terms of area, the three lagoons together constitute 32% of the Republic's and 31% of the all-Ireland lagoon resource (Oliver, 2005 pages 126-127, Table 4.3.1).

Coastal lagoons are 'priority habitats', that is, habitats that merit special conservation measures as they are threatened with extinction. A major threat facing the three lagoons on the South Wexford Coast is further deterioration of their present poor water quality (AQUAFAC, 2018 and EPA, 2018).



Figure 12. Three lagoons, priority habitats, on the South Wexford Coast.

(Source: <https://data.gov.ie/dataset/inventory-of-irish-coastal-lagoons-2007/resource/447993be-b172-4e69-9d9c-d11de53b1072>. Ordnance Survey Ireland Permit No MP 0002120.
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Lady's Island Lake is the subject of an on-going project called CLEAR (Coastal Lagoons: Ecology And Restoration). *"The initial outcome of the project will be a detailed plan to restore the Lady's Island site. The project will also result in the production of a manual documenting methods to quantify excessive nutrient inputs and impacts of lagoon salinity change and flushing rates on conservation status for all Irish lagoons. The manual will outline a suite of techniques to restore environmentally*

degraded lagoons.” (<https://www.projectclear.ie/project-description>).

The CLEAR project uses a pond (Figure 13) at registered quarry Q11 at Inish and Ballyteige Slob as a control site for work at Lady’s Island Lake. The pond adjoins the Ballyteige Channels lagoon.



Figure 13. Westernmost quarry pond at Inish and Ballyteige Slob with the sand dunes at Ballyteige Burrow in the background. The Ballyteige Channels lagoon habitat is located between the dunes and the quarry pond.

(Photo: Jim Hurley)

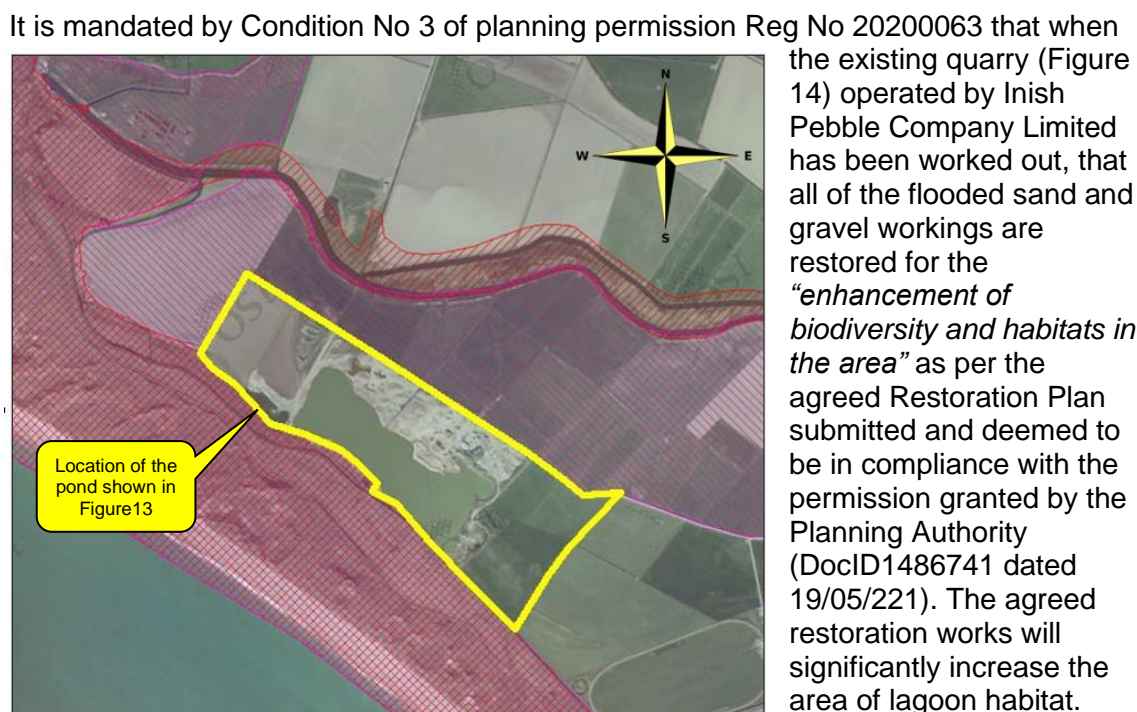
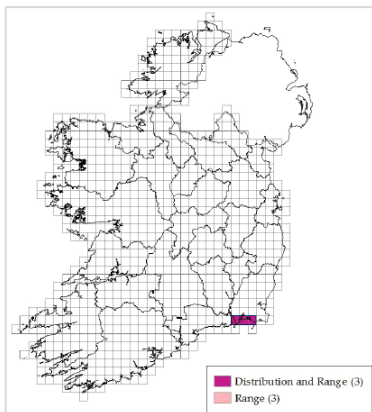


Figure 14. Registered quarry Q11 (edged yellow) at Inish and Ballyteige Slob.

(Source: Hurley, 2020 page 18, Figure 2)

2.3 Saltmarshes



While saltmarshes are Annex I habitats within coastal systems that are shaped by marine influences, they are not regarded as marine habitats in the strict sense.

Bannow Bay supports “Saltmarshes of exceptional species diversity ... The site is of considerable conservation significance”

(<https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY000697.pdf>). Bannow Bay and Ballyteige Lough support an Annex 1 type of saltmarsh found nowhere else in Ireland: ‘Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*) [1420]’ (attached national distribution map from

NPWS, 2019a page 18). The habitat is characterised by the presence of Perennial Glasswort (*Sarcocornia perennis*) (Figure 15), a protected species under the *Flora (Protection) Order, 2015* (S I No 356 of 2015)

(<http://www.irishstatutebook.ie/eli/2015/si/356/made/en/print>). Conservation of this habitat type is entirely location dependant on the South Wexford Coast.



Figure 15. Perennial Glasswort (*Sarcocornia perennis*) in flower.

(Photo: Jim Hurley)

Saltmarshes, together with seagrass meadows, are recognised as important blue carbon sinks.

2.4 Sand dunes

'Fixed coastal dunes with herbaceous vegetation ("grey dunes")', Code No 2130, are a priority habitat. While small examples of the habitat occur at Bannow Strand and Bannow Island at both sides of the mouth of Bannow Bay, an impressive example of national significance occurs at Ballyteige Burrow. "*Ballyteige is recognised as one of the most impressive shingle-based dune systems in the country. ... This coastal site is of major ecological value for its range of good quality coastal habitats*"

(<https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY000696.pdf>).



Scrambled-egg Lichen (*Fulgensia fulgens*) is known to occur at only one location in Ireland: Ballyteige Burrow. It very often grows on top of cushions of moss in slacks where the underlying gravel barrier is exposed. The lichen is composed of overlapping, egg-yellow, crusty scales with lobed margins. Its fruiting bodies are orange-brown in colour. The plant has the distinction of being the only species of lichen afforded protection in Ireland under the *Flora (Protection) Order, 2015*

(S I No 356 of 2015) (<http://www.irishstatutebook.ie/eli/2015/si/356/made/en/print>).

Figure 16. Scrambled-egg Lichen at Ballyteige Burrow. (Photo: Jim Hurley)

In Ireland, the distribution of Wild Asparagus (*Asparagus officinalis* subspecies *prostratus*) is centred on the south-east of the country (Wicklow to Waterford) (<https://bsbi.org/maps?taxonid=2cd4p9h.30ztkp>) with the most extensive population located on the sand dunes at Ballyteige Burrow (Figure 17). The very rare member of the variable lily family is a protected species under the *Flora (Protection) Order, 2015* (S I No 356 of 2015) (<http://www.irishstatutebook.ie/eli/2015/si/356/made/en/print>).



Figure 17. Red berries on Wild Asparagus (*Asparagus officinalis* ssp *prostratus*) in autumn at Ballyteige Burrow.

(Photo: Jim Hurley)



Both Marram dunes (2120) and Fixed dunes (2130) occur on the barrier at Lady's Island Lake, and they support the last surviving stand of Cottonweed (*Achillea maritima*) in Ireland, and one of the last in north-west Europe. In the past, Cottonweed grew over an extensive area of the barrier, but in recent years the population suffered a steep decline. "From a population with more than 1,717 flowering and non-flowering stalks in 1997 (Martin, 1998) the *Otanthus maritimus* population has declined to approximately 30 flowering and non-flowering stalks by the VSM in 2016." (Martin *et al*, 2017 page 244). The plant is a protected species under the *Flora (Protection) Order*, 2015 (S I No 356 of 2015) (<http://www.irishstatutebook.ie/eli/2015/si/356/made/en/print>). The native population now (July 2021) consists of just 11 plants. In an attempt to save the species from extinction in Ireland, the native population is supplemented by 59 plants grown from seed and/or propagated from cuttings, together with 16 offspring from one transplant, in a trial plot managed by the National Parks and Wildlife Service (NPWS).



Figure 18. Cottonweed (*Achillea maritima*) on the barrier at Lady's Island Lake.

(Photo: Jim Hurley)

This element of the proposal seeks to upgrade and enhance the conservation of a range of unique habitats and the species they support. It also provides scope for a demonstration project regarding the restoration and recovery of biodiversity threatened with extinction.



3 SEABIRD CONSERVATION

Six existing Special Protection Areas (SPAs) on the South Wexford Coast are designated to protect 37 named species of wild bird together with wetland and waterbirds in general (<https://www.southwexfordcoast.com/qualifying-interests-sacs/>). Of these 37 named species, the following 15 are seabirds (Table 2) and are qualifying interests of SPAs at three locations.

Name	Code	Keeragh Islands	Saltee Islands	Lady's Island Lake
Fulmar (<i>Fulmarus glacialis</i>)	A009		✓	
Northern Gannet (<i>Morus bassanus</i>)	A016		✓	
Great Cormorant (<i>Phalacrocorax carbo</i>)	A017	✓	✓	
European Shag (<i>Phalacrocorax aristotelis</i>)	A018		✓	
Black-headed Gull (<i>Chroicocephalus ridibundus</i>)	A179			✓
Lesser Black-backed Gull (<i>Larus fuscus</i>)	A183		✓	
Herring Gull (<i>Larus argentatus</i>)	A184		✓	
Black-legged Kittiwake (<i>Rissa tridactyla</i>)	A188		✓	
Sandwich Tern (<i>Sterna sandvicensis</i>)	A191			✓
Roseate Tern (<i>Sterna dougallii</i>)	A192			✓
Common Tern (<i>Sterna hirundo</i>)	A193			✓
Arctic Tern (<i>Sterna paradisaea</i>)	A194			✓
Common Guillemot (<i>Uria aalge</i>)	A199		✓	
Razorbill (<i>Alca torda</i>)	A200		✓	
Atlantic Puffin (<i>Fratercula arctica</i>)	A204		✓	

Table 2. Seabirds that are qualifying interests in designated SPAs.

These 15 species of seabird occur at the following three locations, each of which is rated of national or international importance.

- **Keeragh Islands.** The Keeragh Islands support “a nationally important breeding colony of Cormorant (200 pairs recorded in 2000), which is considered to be one of the largest in the country.” (<https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY004118.pdf>).
- **Saltee Islands.** The Saltee Islands are a “site of international importance for breeding seabirds and has two species which are listed on Annex I of the E.U. Birds Directive.” (<https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY000707.pdf>). [The two Annex 1 species referred to are Peregrine Falcon and Chough.]
- **Lady's Island Lake.** “Lady's Island Lake SPA is one of the most important ornithological sites in the country. It supports one of the best examples of a lagoonal bird fauna in the country, and is of particular note for its breeding colonies of Sandwich Tern, Roseate Tern, Common Tern and Arctic Tern, all species which are listed on Annex I of the E.U. Birds Directive.”

(<https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY004009.pdf>). The Roseate Tern is regarded “the rarest breeding seabird in Europe” (<http://roseatetern.org/index.html>). “Ireland hosts up to an estimated 40% of Europe’s breeding Roseate Terns” (Gilbert et al., 2021 page 18).



Figure 19. Great Cormorants nesting on the Big Keeragh.

(Photo: Jim Hurley)



Figure 20. Viewing part of the Northern Gannet colony on Saltee Island Great.

(Photo: Jim Hurley)

While the breeding grounds of these seabirds on land are protected by their selection as species of ‘Special Conservation Interest’(SCI) and the designation of Special Protection Areas (SPAs), their foraging areas and feeding grounds at sea receive either very limited protection or none at all (Table 3 and Figure 21 & 12).

Approximate width of foraging areas and feeding grounds in metres	Keeragh Islands	Saltee Islands	Lady’s Island Lake
	200m	500m	0m

Table 3. Seabird foraging areas around their breeding grounds in SPAs.

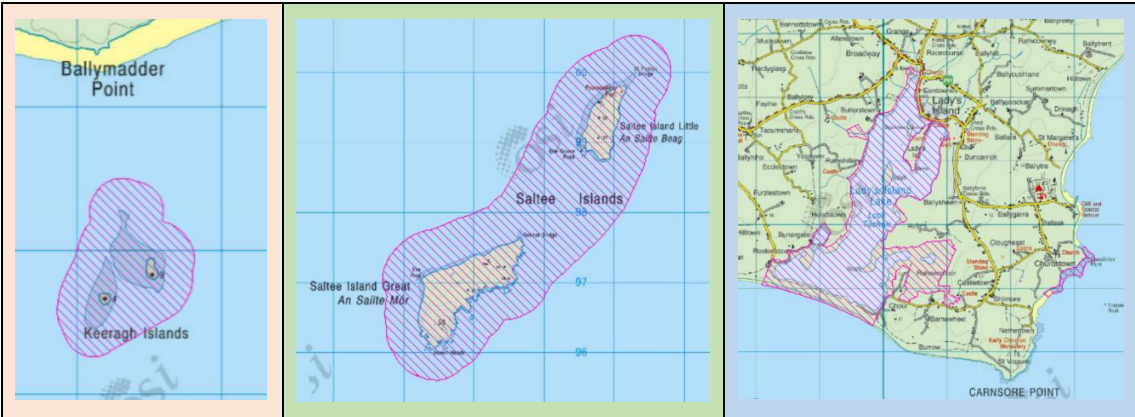


Figure 21. Seabird foraging areas. (The grid is of 1000m sides.)

(Source: <https://dahg.maps.arcgis.com/apps/webappviewer/index.html?id=8f7060450de3485fa1c1085536d477ba>. Ordnance Survey Ireland Permit No MP 0002120. © Ordnance Survey Ireland/Government of Ireland)

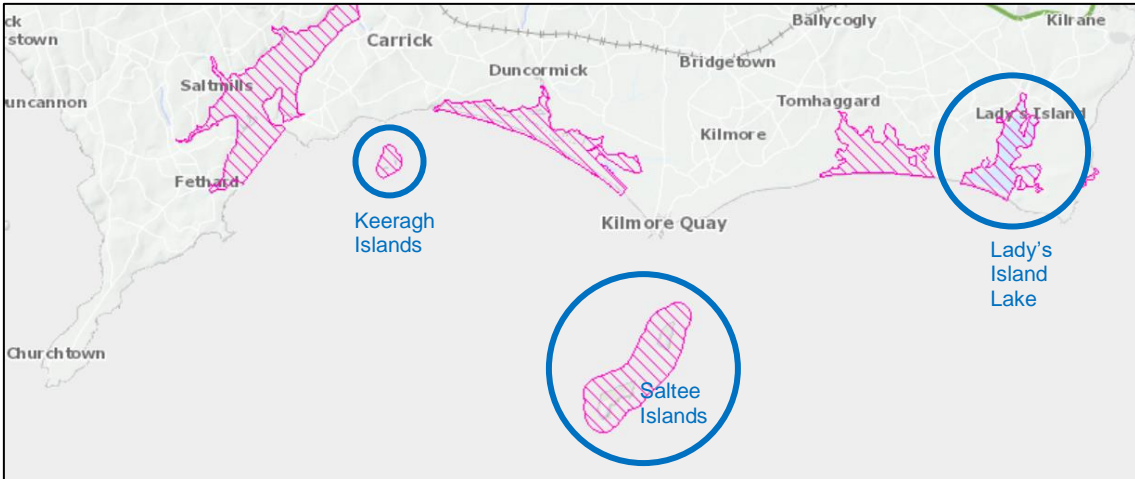


Figure 22. Special Protection Areas on the South Wexford Coast (seabird sites circled).

(Source: <https://dahg.maps.arcgis.com/apps/webappviewer/index.html?id=8f7060450de3485fa1c1085536d477ba>. Ordnance Survey Ireland Permit No MP 0002120. © Ordnance Survey Ireland/Government of Ireland)

This element of the proposal seeks to increase the extent of the protected area that seabirds have to forage and feed in (MPA, 2020, page 95 (77), paragraph 1.3.2.2).

4 GREY SEAL CONSERVATION

The Grey Seal (*Halichoerus grypus*), an Annex II species (Code 1364), is one of the qualifying interests of the Saltee Islands SAC (<https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY000707.pdf>). These marine mammals are protected at ten sites in Ireland (Figure 23). In the south-east of the country, the Saltee Islands are both the only key breeding location and the only protected area for these animals. The next nearest locations designated for Grey Seals are Lambay Island SAC No 000204 some 150km north-north-east of the Saltees and Roaringwater Bay and Islands SAC No 000101 over 200km west-south-west of the Saltees (<https://www.npws.ie/marine/marine-species/grey-seal>). On the South Wexford Coast, the seals are by no means confined to the Saltee Islands. Black Rock near Carnsore Point is a habitual and regularly-used pre-breeding haul out site, and Hook Head is an important post-breeding feeding area when Sprat shoal there between November and February.

Site Code	Site Name
000101	ROARINGWATER BAY AND ISLANDS SAC
000147	HORN HEAD AND RINCLEEVAN SAC
000190	SLIEVE TOOHEY/TORMORE ISLAND/LOUGHROS BEG BAY SAC
000204	LAMBAY ISLAND SAC
000278	INISHBOFIN AND INISHSHARK SAC
000328	SLYNE HEAD ISLANDS SAC
000495	DUVILLAUN ISLANDS SAC
000507	INISHKEA ISLANDS SAC
000707	SALTEE ISLANDS SAC
002172	BLASKET ISLANDS SAC




Figure 23. Designated SACs for the Grey Seal.

(Sources. Table: <https://www.npws.ie/marine/marine-species/grey-seal>. Map: <https://eunis.eea.europa.eu/species/1421#protected>)



Figure 24. Grey Seal pup on Saltee Island Little. (Photo: Jim Hurley).



5 ASSOCIATED ECOSYSTEM SERVICES

5.1 Overlap

5.1.1 Cetaceans

The Irish Whale and Dolphin Group (IWDG) is proposing nine Marine Conservation



Zones as MPAs for cetaceans. The centres of each of these nine proposed MPAs are shown on the attached figure. Proposed area No 8 is described as follows: **“South Coast (Fastnet to Hook Head). Species of interest: Large whales - fin whales, humpback whales. Justification: Data contained here suggests an eastward movement of large whales from spring to autumn and that this area is important as a foraging area for both humpbacks and fin whales, with data over a number of decades to support this.”**

(https://iwdg.ie/marine-conservation-zones/?mc_cid=307f1e5aa1&mc_eid=b57d14f3f5). The eastern extremity of proposed IWDG area No 8 overlaps slightly with the western extremity of the proposed South Wexford Coast MPA.



■ Enjoying the whale watch at Hook Head.

Whale watchers hit Hook Head

THERE WAS a good turnout for the recent whale watch at Hook Head, one of six taking place the same day at centres throughout the Ireland.

But despite a lot of interest and dozens of eagle eyes on the water, no whales were spotted, although local naturalist Jim Hurley, who led the watch, said there were possible sightings of harbour porpoises and common dolphins. People felt they saw harbour porpoises and common dolphins, but

nothing was confirmed, said Mr Hurley. He said there was a hard core of between 70 and 80 out for the watch and floating groups of visitors who remained for a shorter time than the full watch between 2 p.m. and 5 p.m.

‘We had a beautiful afternoon and were delighted with the response,’ he said. Organised by the Irish Whalewatch and Dolphin Group (IWDG), in association with Patagonia and Innis, the purpose of the watch was to mark the 10th

anniversary of the declaration of Irish waters as a whale and dolphin sanctuary and to promote interest in whales and dolphins.

‘About 80 different species of whales and dolphins occur worldwide, 23 of them have been recorded in Irish waters, 13 on the South Wexford coast,’ said Mr Hurley, adding that most local records were of animals stranded dead on the shore.

The IWDG is a voluntary organisation dedicated to the conservation and better under-

standing of whales, dolphins, and porpoises in Irish waters.



New Ross Standard,
issue of 15 August
2001, page 15.

5.1.2 Other overlaps

It is not known if other proposed MPAs exist that may overlap with, or impact on, the proposed South Wexford Coast MPA.

5.2 Non-MPA attributes

The stated primary objective of MPAs is the area-based protection and management over the long term of marine habitats and/or species. The marine habitats and species detailed above exist due to the presence of natural features and non-MPA attributes that are specific and/or unique to the South Wexford Coast. These natural features are outlined below.

5.2.1 Geology

5.2.1.1 Bedrock geology

The bedrock geology of the South Wexford Coast is very diverse (Figure 25). On the foreshore at Kilmore Quay, the coastal strip features the main exposure in Ireland of the over-600 million year old Precambrian basement of the microcontinent Avalonia, while the limestone on the foreshore at Hook Head is known internationally for the outstanding collection of fossils of marine life that it supports (Tietzsch-Tyler and Sleeman, 1994).

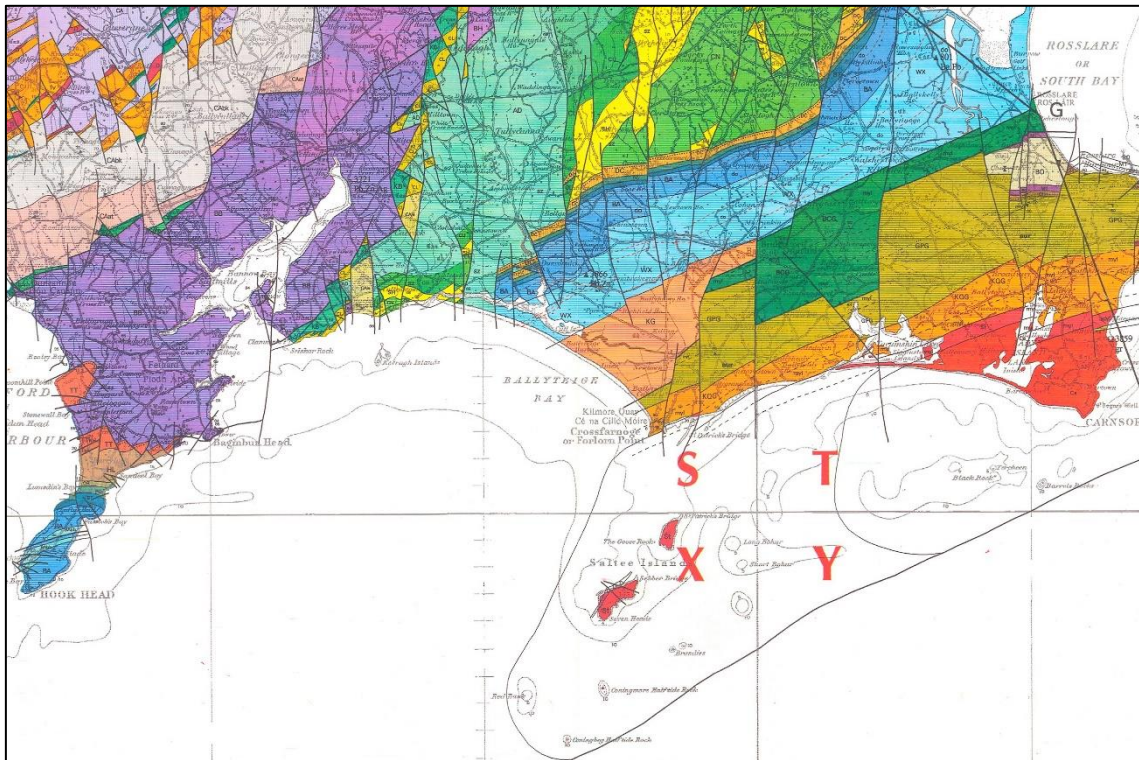


Figure 25. The diverse bedrock geology of the South Wexford Coast.

(Source: Tietzsch-Tyler and Sleeman, 1994)

The bedrock geology of the nearshore seabed reflects the diversity of rock types found on land.

5.2.1.2 Geological heritage sites

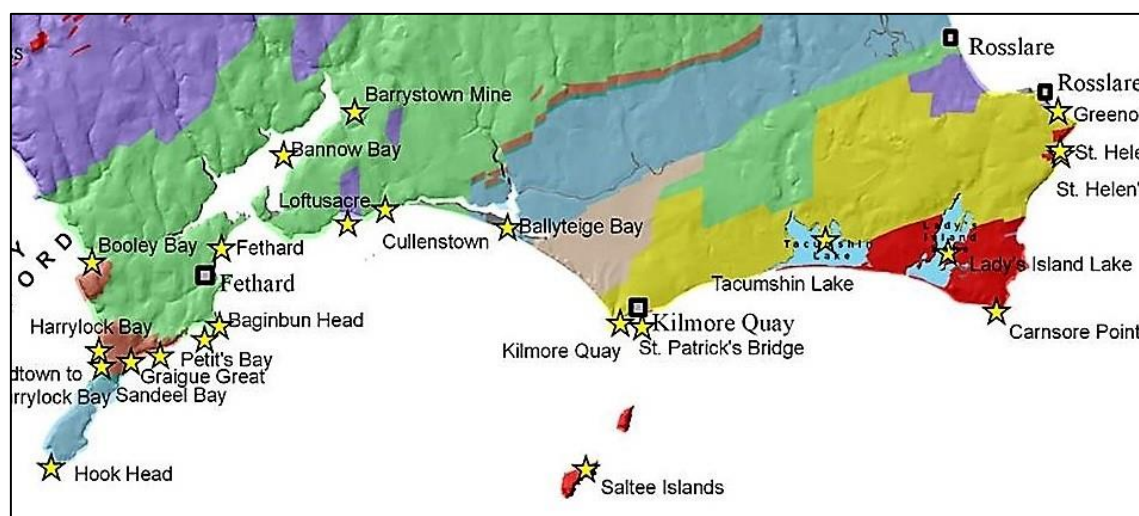
The online report titled '*The Geological Heritage of Wexford*' comprises an audit of sites of particular geological, geomorphological, mining and quarrying interest in Co Wexford including fossils and deposits from previous ice ages (Meehan *et al*, 2018). The project is supported by Geological Survey Ireland, Wexford County Council and The Heritage Council. The online publication comprised three parts: (1) the main report, a 54-page overview; (2) an 8-page introduction to the individual site reports; and (3) 42 individual site reports, the following 17 of which refer to the South Wexford Coast (Table 4). These 17 sites are arranged here in sequential order of occurrence from west to east and their locations are shown (Table 4).

Hook Head (WX023)	Bannow Bay (WX004)	Kilmore Quay (WX025)
Sandeel Bay (WX035)	Barrystown Mine (WX005)	St Patrick's Bridge (WX040)
Graigue Great (WX019)	Loftusacre (WX029)	Tacumshin Lake (WX041)
Petit's Bay (WX032)	Cullenstown (WX015)	Lady's Island Lake (WX028)
Baginbun Head (WX001)	Ballyteige Bay (WX003)	Carnsore Point (WX012)
Fethard (WX017)	Saltee Islands (WX034)	

Table 4. Geological heritage sites on the South Wexford Coast.

(Source: Meehan *et al*, 2018 Part 2, page 4)

Note: Hook Head overview (WX024) is not a separate site to Hook Head (WX023). The site formerly known as Wood Village is renamed 'Fethard' and Ballyteige 'Bay' site refers to Ballyteige Burrow.



(Source: Meehan *et al*, 2018 Part 2, page 4)

Highlights. Highlights of the geological heritage of the South Wexford Coast include

- The fossils, rock formations and historic manufacture of millstones at Hook Head.
- Bannow Bay for its textbook coastal and depositional features, mining heritage and the particularly impressive exposure of a raised beach at Fethard.
- The shingle-based dune system at Ballyteige Burrow, regarded as one of the most impressive in Ireland.
- The Saltee Islands.

- The Precambrian basement of the microcontinent Avalonia at Kilmore Quay and St Patrick's Bridge.
- The barrier coastline and back-barrier lagoons at Ballyteige Burrow, Tacumshin Lake and Lady's Island Lake.

Recommendations. Since they are among the most important geological sites within Co Wexford, all seventeen sites on the South Wexford Coast are recommended to Wexford County Council as County Geological Sites (CGSs) for inclusion within the County Development Plan. The following eight of the seventeen sites are rated of national importance and are recommended to government for designation as geological Natural Heritage Areas (NHAs): Hook Head, Sandeel Bay, Fethard, Bannow Bay, Saltee Islands, Kilmore Quay, Tacumshin Lake and Lady's Island Lake (Meehan *et al*, 2018 Part 1, page 9).

The report suggests that the Hook peninsula may be an area suitable for consideration for proposal for designation a geopark (Meehan *et al*, 2019, main report page 20).

5.2.2 Ireland's Great Barrier Coast

The South Wexford Coast is unique in that it is Ireland's finest barrier coastline. South Wexford gives the greatest expression in Ireland of a barrier coastline with excellent examples of fringing, transgressive barriers at Ballyteige Burrow, Tacumshin Lake and Lady's Island Lake (Carter and Orford, 1980; Carter and Orford, 1981; Carter and Orford, 1982; Orford and Carter, 1982a; Orford and Carter, 1982b; Ruz, 1989, Carter *et al.*, 1991; Carter *et al.*, 1994).

5.2.3 Celtic Sea Front

The South Wexford Coast is unique in that it lies at the western end of the Celtic Sea thermal front that separates the Irish Sea from the Celtic Sea (Lauria, *et al*, 2012). The meandering front extends from the South Wexford Coast to the coast of Pembrokeshire in Wales. Upwelling of nutrient-rich water along the front drives food chains that support populations of fish and the seabirds and cetaceans that feed on them.

5.2.4 Sunny South East

The South Wexford Coast is unique nationally in that it enjoys the mean highest number of hours of sunshine both per year (*c* 1600 hours) and per day (*c* 7 hours) (<https://www.met.ie/climate/what-we-measure/sunshine>). High sunshine levels coupled with thermal layering in the Celtic Sea results in warmer sea temperatures and these are significant biogeographically in that some marine species with a predominantly southern distribution reach their northern limit on or near the South Wexford Coast and vice versa.

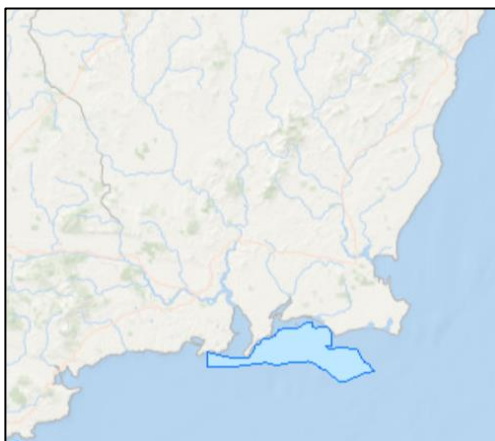
5.2.5 Wetland Birds

Four wetland sites on the South Wexford Coast support 24 species of birds in numbers that are of international and/or national importance (Lewis *et al.*, 2019 and <https://www.southwexfordcoast.com/swcprom/wp-content/uploads/2021/05/Wetland-birds.pdf>)

5.3 Ecosystem services

The South Wexford Coast provides a wide range of ecosystem services which support commercial fisheries at Kilmore Quay, and to a lesser extent at the smaller ports at Slade and Fethard, together with aquaculture at Bannow Bay. These ecosystem services and benefits also underpin health and wellbeing, recreation, and tourism along the coastal strip and among the communities it supports.

5.3.1 Commercial fisheries



Commercial capture fishing on the South Wexford Coast ranges from periwinkle picking on rocky mainland shores, to pot fishing for lobsters, crabs and whelks in the inshore waters, to dredging and trawling (beam, bottom otter and pelagic) offshore.

The proposed MPA is the only spawning ground (blue fill) for Atlantic Herring in south-east Ireland (Source: Ireland's Marine Atlas at <http://atlas.marine.ie/#?c=52.3722;-7.5146:8>).

The main port, and centre for fin fish and shellfish processing, is at Kilmore Quay.

Figure 26. Atlantic Herring spawning ground (blue fill).

(Source: Ireland's Marine Atlas at <http://atlas.marine.ie/#?c=52.3722;-7.5146:8>)



Figure 27. Fishing boats in Kilmore Quay harbour.

(Photo: Jim Hurley)

5.3.2 Fisheries Natura Declaration

Fishing in the Hook Head and Saltee Islands SACs is regulated by the Sea-Fisheries Protection Authority (SFPA) Fisheries Natura Declaration No 3 of 2017 (Figure 28).

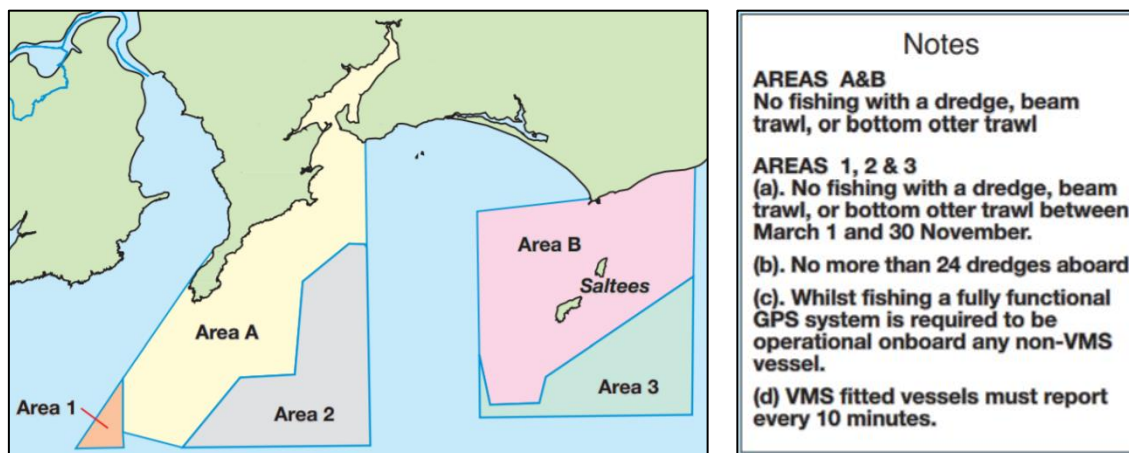


Figure 28. Fisheries Natura Declaration areas on the South Wexford Coast.

(Source: <https://www.sfpa.ie/LinkClick.aspx?fileticket=6uq4fyfDIZQ%3d&portalid=0>)

There is no significant evidence that the existing marine Natura 2000 sites and MPAs on the South Wexford Coast are impacting negatively on local fisheries.

The successful co-existence of fisheries and the protected sites based on explicit conservation objectives set out in Fishery Natura Plans for both the Hook Head SAC and the Saltee Islands SAC is referenced and acknowledged in the Advisory Group's report (MPA, 2021 page 168).

However, it is not clear how on-going bottom trawling, scallop dredging and other activities that repeatedly impact negatively on the seabed by denuding it of its biomass are affecting the long-term sustainability of the marine Natura 2000 sites and MPAs. That issue requires further investigation and clarification.

5.3.3 Kilmore Quay

The village of Kilmore Quay, a fishing port, service settlement, and holiday resort, returned a population size of 372 in the 2016 census (http://census.cso.ie/sapmap2016/Results.aspx?Geog_Type=ST2016&Geog_Code=C4A1829-87CD-42E9-BBCC-4709B1AC253E).

In 2017, Kilmore Quay Community Development Association Limited (KQCDA) commissioned consultants to carry out a feasibility study regarding the fishing port, village and environs. The project was funded by the Irish government and part-financed by the European Union under the National Development Plan 2014-2020 through the sustainable development of the fisheries-dependent area measures. After eight months of consultation with local people and stakeholders, a 123-page report was published (KQCDA, 2018). The key, overarching recommendation of that report was as follows: -

“Our vision is for Kilmore Quay to become Ireland’s premier coastal eco-village, a flagship project of national and international significance, which uses its rich store of natural and cultural assets to develop a better life and future for all the community.”

(KQCDA, 2018 page 10).

5.3.4 Aquaculture

Cultivation of Pacific Oysters using bags and trestles on the intertidal foreshore is practiced by four licenced operators at Bannow Bay (Figure 29). The four enterprises are adjoining and cover an area of 51.5ha (<https://wayback.archive-it.org/org-1444/20201125153827/https://www.agriculture.gov.ie/seafood/aquacultureforeshoremanagement/aquaculturelicensing/aquaculturelicencedecisions/wexford/>).



Figure 29. Aquaculture sites (arrowed) on the South Wexford Coast.

(Source: <http://atlas.marine.ie/#?c=52.2066;-6.6508;11>)

5.3.5 Tourism

The biodiversity of South Wexford Coast is a valuable resource in local tourism for nature watching, walking, photography, *plein-air* painting, and other environmentally-friendly activities. The most popular location is Saltee Island Great to which large numbers of day-trippers, especially photographers, flock to see the breeding seabirds, especially the Atlantic Puffins (Figure 30).

Hook Rural Tourism Ltd is actively seeking to promote the biodiversity of the Hook peninsula and the existing Hook Head MPA (<https://hookpeninsula.com/biodiversity/> and <https://www.southwexfordcoast.com/swcprom/wp-content/uploads/2021/03/Hook-Peninsula-Biodiversity-Feasibility-Study.pdf>).



Figure 30. Day-trippers and photographers watching Atlantic Puffins (inset) at their nest holes at the Wherry Hole on Saltee Island Great. (Photo: Jim Hurley). During autumn 2020, contractors engaged by the NPWS exterminated the Brown Rat population on the island thereby greatly increasing the likelihood of breeding success by ground-nesting birds like Puffins.

5.3.6 Shipwrecks



The South Wexford Coast is often called "The Graveyard of a Thousand Ships". The nearshore waters hold a significant number of wrecks, and these are hotspots for both wreck angling (<https://fishinginireland.info/charterboats/wexford/>) and scuba diving (<http://divewexford.org/> and <http://divewexford.org/where-we-dive/>).

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