

## **Sand bank justification document**

According to the “*Guidelines for the establishment of the Natura 2000 network in the marine environment: Application of the Habitats and Birds Directives*”, sandbanks are elevated, elongated, rounded or irregular topographic features, permanently submerged and predominantly surrounded by deeper water with an uppermost portion within the 20m contour. They consist mainly of sandy sediments, but larger grain sizes, including boulders and cobbles, or smaller grain sizes including mud may also be present on a sandbank. It is appropriate to also include sections of the sandbank extending below 20m in depth where these are an integral part of the overall sandbank feature. The European Commission document “*Criteria for assessing national lists of pSCI at bio-geographical level (Hab 97/2/Rev 4)*” indicates that national lists of proposed Sites of Community Importance (or Special Areas of Conservation) for specific habitat features (or species) containing less than 20% of the total national resource are considered insufficient/inadequate. Values between 20-60% may be acceptable subject to expert judgement. Ideally the goal for each member state would be to designate greater than 60% of the resource for each habitat feature such as Sand banks slightly covered by seawater at all times. Achieving a geographical range or spread is also desirable in encompassing the natural variation of habitat types found within a jurisdiction.

Identifying sand bank habitat should focus on areas that have their “uppermost portion within the 20m contour”. Defining the lower limit of the sand bank feature is the main difficulty and particularly delineating banks from landward extensions of shallower sediments. The application of the EU Guidance in the UK has faced similar problems in defining the lower bathymetric extent of sandbank habitat. In correspondence received from CCW/JNCC it was indicated that all of the smaller banks along the western flank of the UK, similar in nature to those within Irish Jurisdiction, have been notified as multi-feature marine sites. This approach allowed the competent authority to concentrate on capturing the seaward extent, which is generally easier, of the sandbank within the 20m contour and did not to any great extent advance the Irish difficulty of applying the rule of “predominantly surrounded by deeper water”. Irish sandbanks along the eastern seaboard do not allow this approach to be taken as they lack qualifying interests at the landward extent. In the North Sea, the UK undertook an extensive bathymetric survey and was able to define the prominence of the feature as a function of slope calculations. This mapping option is not available in Ireland as some of the banks are considered shipping hazards and thus vessels would have limited access.

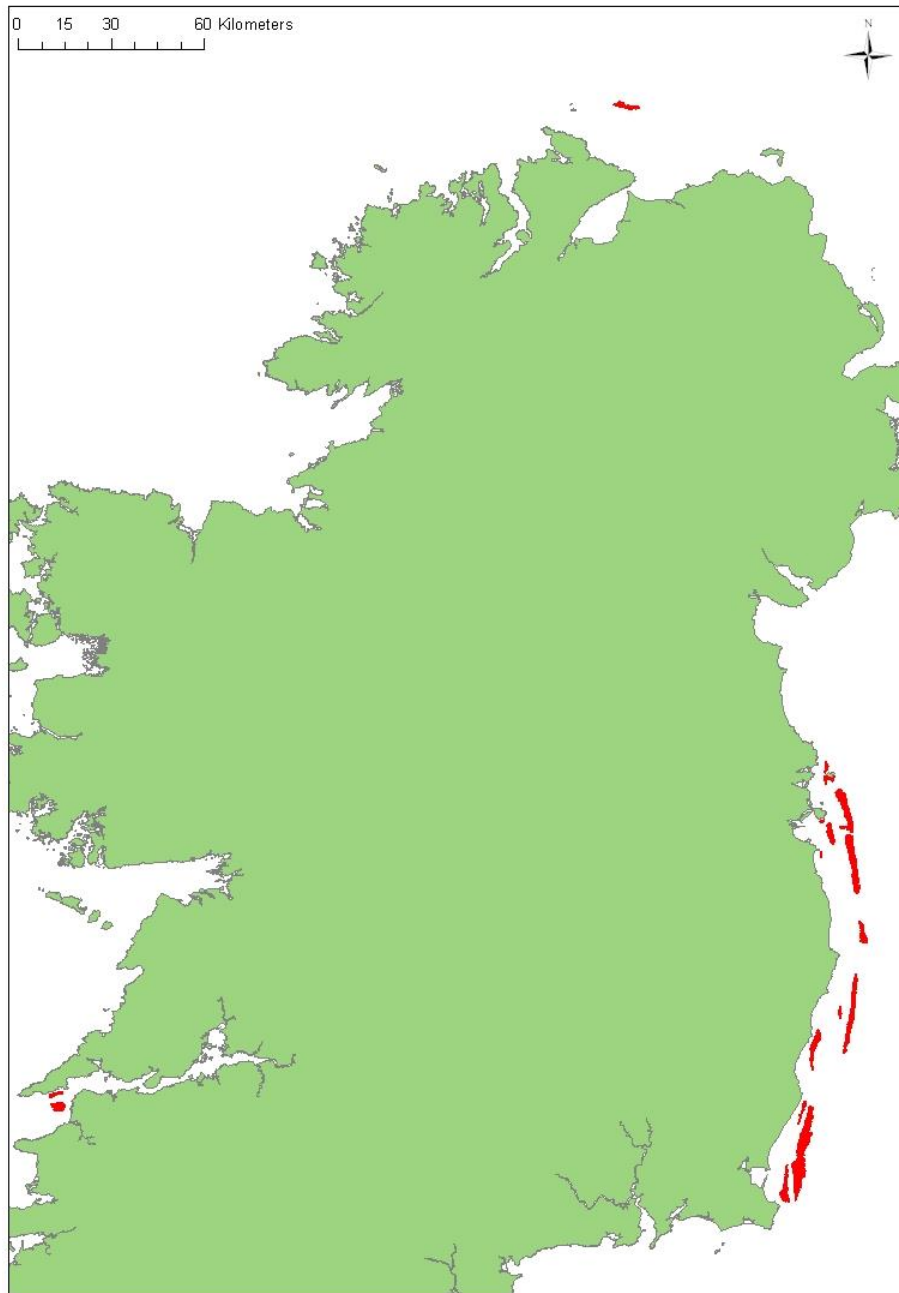
The main problem in calculating a national resource of sand banks in Ireland is applying a consistent rule to include or exclude the habitat feature. In the western and northern coasts the sand banks are apparently clearly defined and distinct applying the EU definition. The Irish Sea has shallower waters in the coastal zone of the south and deeper waters in the north. Using contour lines on Admiralty charts is a useful starting point in identifying this feature. If a 10m contour is used it proves relatively reliable in some areas but underestimates the sandbank resource in others. If a 20m contour is used, dependent on the location, it tends to both overestimate and underestimate the apparent resource. The variation in the location and surrounding topography which sand banks are found means that applying a universal rule based on a depth contour-line faces challenges.

Because of natural variability the best available approach is to look to the prominence or elevation of the habitat relative to its actual location and that of the surrounding waters and use expert judgement to define the lower limit. In deriving this estimate no areas below the 20m contour are identified because it becomes very difficult to accurately resolve seabed features. Using this combination of expert judgement and local prominence it is possible to generate a best-fit estimation of the habitat resource. This approach delineated three distinct types of sand bank habitat in Irish territorial waters. These were:

1. Inshore banks: rising above the 10m contour line, near the coastline
2. Discrete offshore banks: less than 20m depth and prominent relative to the surrounding seabed
3. Diffuse offshore banks: less than 20m depth but forming a series of banks without a dividing contour below 20m

**Table 1 Sand bank resources identified from around the Irish Coast.**

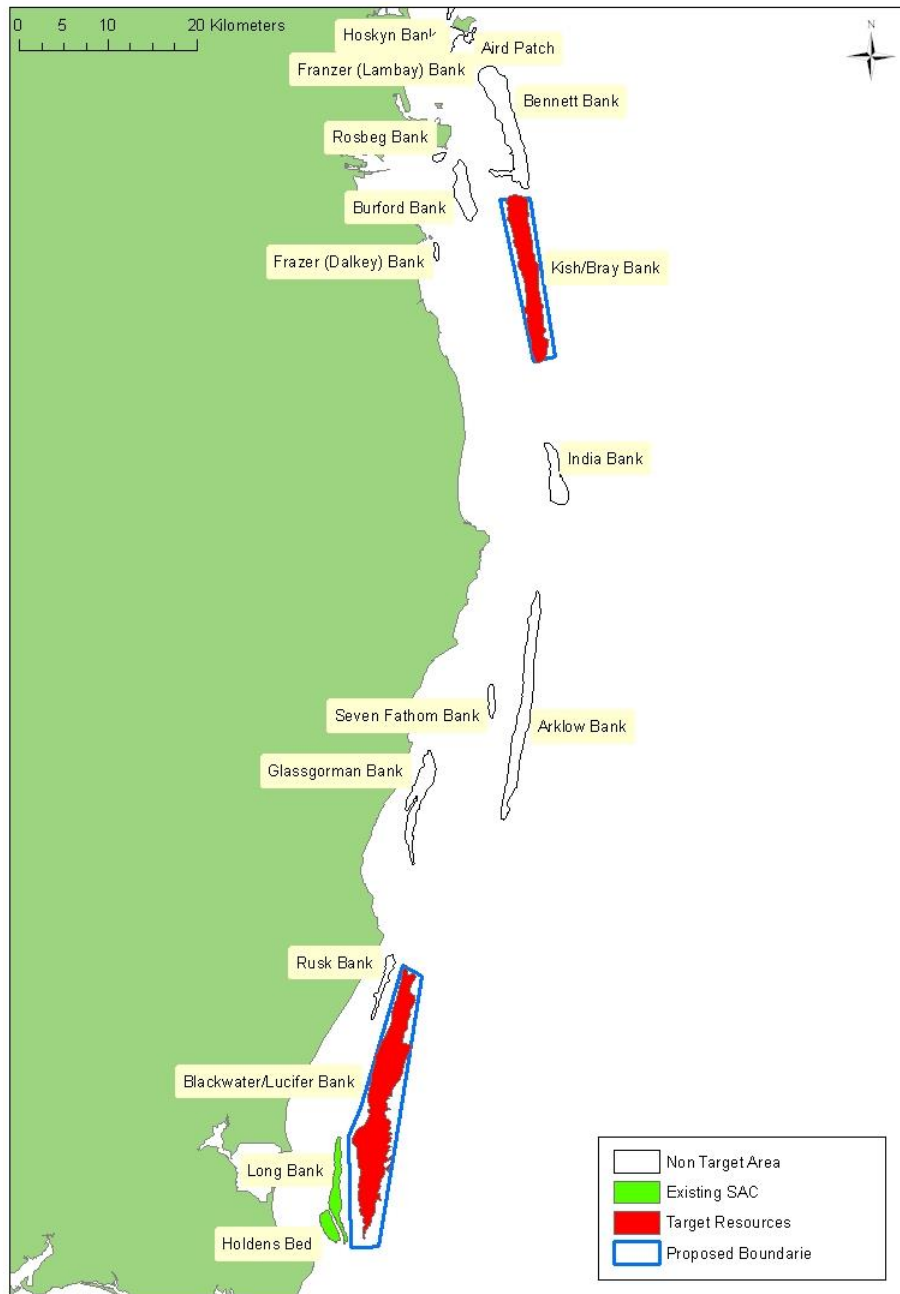
<b>ID</b>	<b>SANDBANK</b>	<b>AREA (HECT)</b>	<b>MORPHOTYPE</b>	<b>LOCATION</b>
1	Ballybunion Bank	959.88	Inshore Bank	Lower River Shannon
2	Seven Fathom Bank	222.84	Offshore Discrete	Wicklow Coast
3	Hempton's Turbot Bank	691.22	Offshore Discrete	Donegal Coast
4	Kilstiffin/Turbot Bank	393.35	Inshore Bank	Lower River Shannon
5	Bennett Bank	2816.19	Offshore Diffuse	Dublin Coast
6	Burford Bank	978.41	Offshore Discrete	Dublin Coast
7	Rosbeg Bank	100.65	Inshore Bank	Dublin Coast
8	Hoskyn Bank	277.90	Inshore Bank	Dublin Coast
9	Franzer (Lambay) Bank	220.57	Inshore Bank	Dublin Coast
10	Frazer (Dalkey) Bank	81.11	Inshore Bank	Dublin Coast
11	Kish/Bray Bank	3517.95	Offshore Diffuse	Dublin/Wicklow Coast
12	Arklow Bank	2875.66	Offshore Discrete	Wicklow Coast
13	Glassgorman Bank	1413.87	Inshore Bank	Wicklow/Wexford Coast
14	Rusk Bank	440.81	Inshore Bank	Wexford Coast
15	Long Bank	878.54	Inshore Bank	Wexford Coast
16	Holdens Bed	440.81	Inshore Bank	Wexford Coast
17	Blackwater/Lucifer Bank	7301.51	Offshore Diffuse	Wexford Coast
18	India Bank	950.95	Offshore Diffuse	Dublin/Wicklow Coast
19	Aird Patch	100.41	Inshore Bank	Dublin Coast



**Figure 1 The national resource of sand bank (red) habitat identified from Admiralty Charts and from biological surveys**

A minimum estimate of the total area of sand bank habitat was 24,662.62 hectares. This is a 17% increase on the previous estimate derived for 2007 Habitats Directive report. The greatest resource of sand banks is found within the diffuse offshore banks (14,586 hectares). Currently the resource of sand bank habitat within Special Areas of Conservation is 2672.58 hectares or 11%. It is also evident that the greatest resource of this habitat type is found within the Irish Sea (Table 1). If the sand bank features in the

Irish Sea are examined it is clear that the greatest resource is diffuse offshore banks formed from several banks joined together (Figure 1).



**Figure 2 Target areas considered for sandbank designation in the Irish Sea (red) bounded by proposed SACs (blue) relative to the currently designated resource (green)**

There are a number of considerations that should be noted in relation to the designation of sand bank habitats:

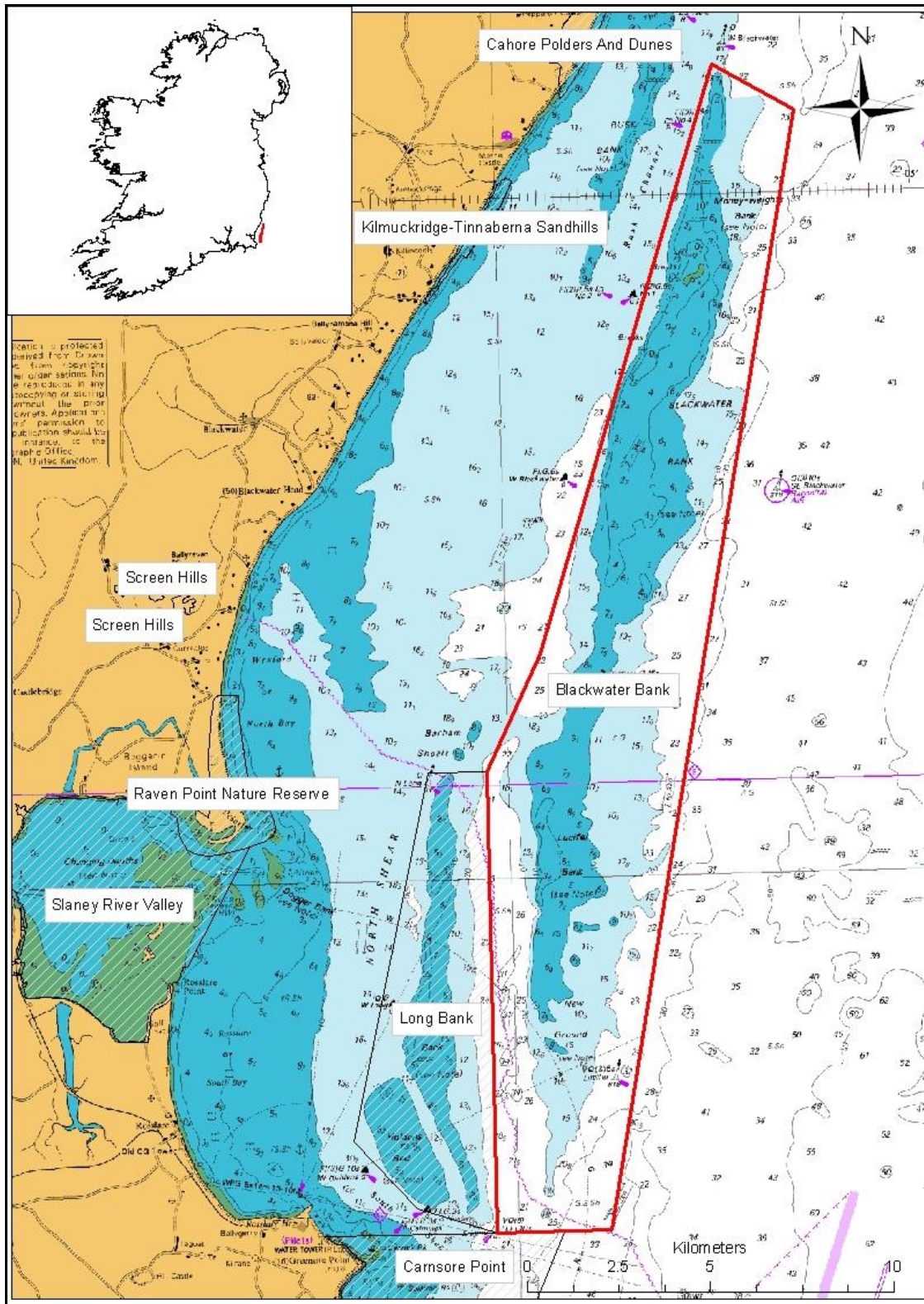
1. A “Do-Nothing” scenario is not possible as Ireland currently only has 11% of the national sand bank resource within the Natura 2000 Network and the minimum required by the European Commission is 20%.
2. Of all the sand banks identified in Irish waters over 61% have been directly surveyed. Another 16% have been surveyed through development applications (*i.e.* Environmental Impact Statements). This habitat-type is thus very well known nationally and appears to be fairly consistent in the expression of types of species and faunal communities identified.
3. The mapping methods used because they are reliant on the drawn 20m contour on the Admiralty maps and are not fully supported by other bathymetric measurements are likely to underestimate the total resource of the habitat. This is particularly true for sand banks within or adjacent to water deeper than 20m where the feature extends deeper but it cannot be mapped because the data available is not accurate enough. For this reason the actual national resource is likely to be marginally larger than the one calculated. Prudence would suggest exceeding the 20% guidance from the Commission by a safe margin to ensure compliance.
4. Hempton’s Turbot Bank must be included in any new list for designation for sand banks as the European Commission specifically notified Ireland of a geographical deficit in relation to the north western coasts. With the addition of this site the total sand bank habitat within the network comes to 13.6%, which is still insufficient. Therefore consider the following options:

- The addition of Blackwater Bank (to the above) would bring the resource within the network to **43%**. This comfortably exceeds the required values.
- Kish/Bray Banks added to the required designations would encompass **27%** of the habitat within the network.
- If Kish/Bray, Blackwater and Hempton's Banks were proposed it would include in the network **57%** of the national resource (along with the existing SACs).

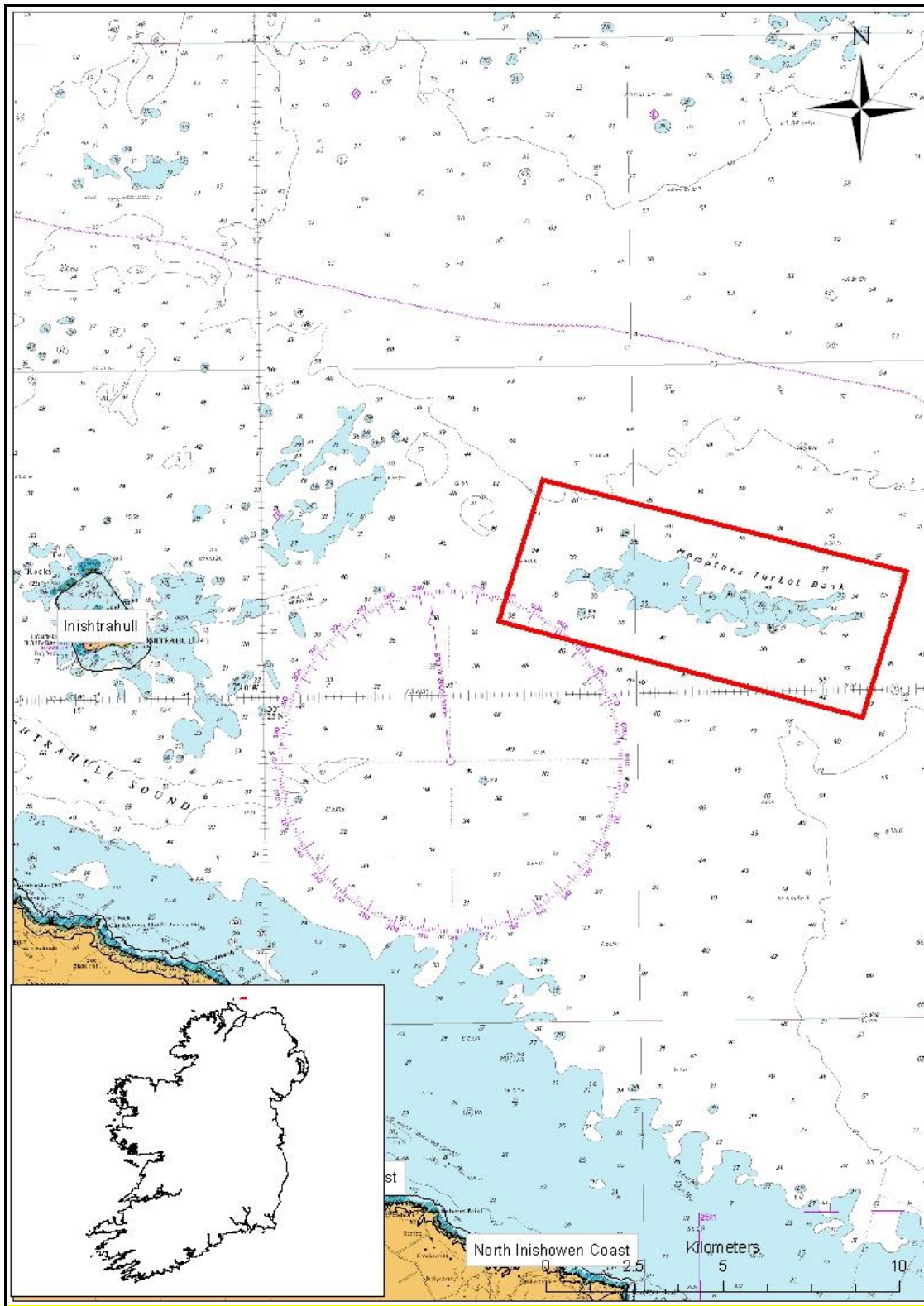
The option of designating Blackwater Bank and Hempton’s Turbot Bank should be the preferred preference as it would safely increase the area of sand bank within the Natura network to target levels. Both locations are in almost pristine condition, with good representation of the species typical for Irish sand banks, the location and area of habitat within the network would comply with guidance received from the European Commission, and current indications are that there are no operant or expected pressures at either site that would compromise the long-term sustainability of the habitat feature.

(This is not true for Kish/Bray Bank as there is an option on a Foreshore Lease in relation to the Dublin Array Wind Park)

The proposed SAC designations are likely to satisfy requirements under the Habitats Directive for designations nominated for the feature Sand banks slightly covered by seawater at all times.



**Figure 3** The proposed boundary for Blackwater Bank cSAC (redline) and adjacent designated Special Areas of Conservation (cross-hatched)



**Figure 4** The proposed boundary for Hempton's Turbot Bank cSAC (red line) and existing adjacent designations at North Inishowen Coast and Inishtrahull SACs