

Blue lines indicate the area meeting the ISRA Criteria; dashed lines indicate the suggested buffer for use in the development of appropriate place-based conservation measures

## OUTER THAMES ISRA

### European Atlantic Region

#### SUMMARY

Outer Thames is located on the east coast of England, United Kingdom of Great Britain and Northern Ireland. The area is an estuarine system characterised by mudflats, salt marshes, and sandbanks. It is influenced by multiple rivers providing freshwater input and nutrients. Within this area there are: **reproductive areas** (Thornback Skate *Raja clavata*).

#### CRITERIA

##### Sub-criterion C1 - Reproductive Areas

— —  
**UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND**  
 — —

**0-25 metres**  
 — —

**1,779.5 km<sup>2</sup>**  
 — —





## DESCRIPTION OF HABITAT

Outer Thames is located on the east coast of England, United Kingdom of Great Britain and Northern Ireland. It is an estuarine system that sits on the European continental shelf. The area is characterised by mudflats, salt marshes, and sandbanks, with large tidal streams shifting mobile sediments continually (Baugh et al. 2013). Substrates are mud, silt, and gravel.

North Sea tides enter the estuary from the northeast, and the English Channel tides enter from the southern part of the estuary. The tidal range can be up to 5 m (Rossington & Spearman 2009). The area is influenced by multiple rivers, which provide nutrients through freshwater input. This includes the Rivers Orwell and Stour to the north. Along the Essex coastline, the area is influenced by the Rivers Colne, Blackwater, Crouch, and Roach. On the north coast of Kent, the area is influenced by the Rivers Thames, Medway, and Swale.

This Important Shark and Ray Area is benthic and is delineated from inshore and surface waters (0 m) to 25 m based on the bathymetry of the area.

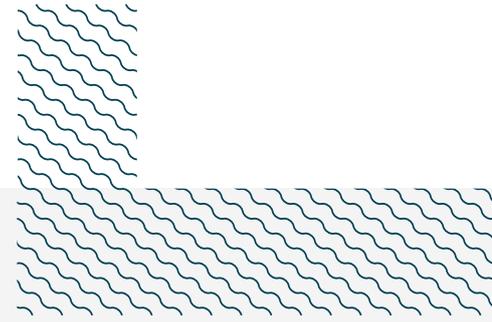
## ISRA CRITERIA

### SUB-CRITERION C1 – REPRODUCTIVE AREAS

Outer Thames is an important reproductive area for one ray species.

Early life stages of Thornback Skate are regularly and predictably observed, year-to-year, in this area (Ellis et al. 2012, 2024a, 2024b). Five stations within this area have been surveyed across multiple years through the annual United Kingdom beam trawl survey (ICES 2025). Since 2010 (excluding 2022 when these stations were not fished), 830 Thornback Skates were caught at these stations. Of these, an average of 66% (range: 22–96% annually) are considered neonates/young-of-the-year (YOY), measuring  $\leq 30$  cm total length (TL). Fishery-independent length frequency data clearly indicate the first cohort at  $\leq 30$  cm TL. Size-at-birth for this species is reported at  $\sim 10$ –13 cm TL (Last et al. 2016) with individuals up to 30 cm TL being considered neonate/YOY in other regions (Alkusaairy 2019).

Another survey operating in the area during 2012, 2022, 2023, and 2024, using a 2 m beam trawl, recorded 95 Thornback Skates (ICES 2025). On average, 74% were neonate/YOY measuring  $\leq 30$  cm TL. The proportion of neonates/YOY of all life stages was recorded in 2010 (67%), 2022 (80%), 2023 (69%), and 2024 (72%). Both spent and in situ Thornback Skate egg cases were found at 52% of the fishing stations in another contemporary survey in the same area in 2018 (Cefas unpubl. data 2025). This area has some of the highest and most regular and predictable observations of early life stage Thornback Skate in the United Kingdom of Great Britain and Northern Ireland.



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### **Suggested citation**

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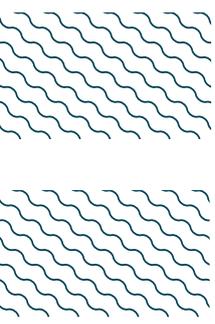
## QUALIFYING SPECIES

Scientific Name	Common Name	IUCN Red List Category	Global Depth Range (m)	ISRA Criteria/Sub-criteria Met									
				A	B	C1	C2	C3	C4	C5	D1	D2	
RAYS													
<i>Raja clavata</i>	Thornback Skate	NT	0-1,020	X		X							

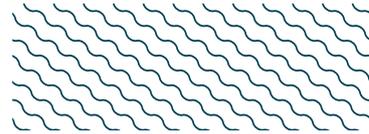
## SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
<b>SHARKS</b>		
<i>Alopias vulpinus</i>	Common Thresher	VU
<i>Galeorhinus galeus</i>	Tope	CR
<i>Mustelus asterias</i>	Starry Smoothhound	NT
<b>RAYS</b>		
<i>Dasyatis pastinaca</i>	Common Stingray	VU

*IUCN Red List of Threatened Species Categories are available by searching species names at [www.iucnredlist.org](http://www.iucnredlist.org) Abbreviations refer to: CR, Critically Endangered; EN, Endangered; VU, Vulnerable; NT, Near Threatened; LC, Least Concern; DD, Data Deficient.*



## SUPPORTING INFORMATION



There are additional indications that this may be an important reproductive area for one shark species.

Early life stage Starry Smoothhound measuring  $\leq 32$  cm TL have been recorded in this area, and in higher abundance than in adjacent areas (Ellis et al. 2005, 2024a). Pregnant females are often caught in the southern North Sea (McCully Phillips & Ellis 2015), and the presence of large, female Starry Smoothhound in the area has also been reported in other data sources (Silva & Ellis 2019; Griffiths et al. 2020). Further information is required to determine the regularity and predictability of these observations.



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