

'We also wish to maintain the right to navigate through a wind farm. The RYA is not "anti-wind farm" – we don't want to automatically object to such developments – our concerns are purely based on navigational safety issues.'

Who polices safety zones?

A permanent notice to mariners on the Port of London Authority website has imposed a 500m safety zone around the works site of the Gunfleet Sands development off the River Blackwater and River Crouch Estuaries on the East Coast.

The department of Business Enterprise and Regulatory Reform published the result of a consultation on the creation of safety zones, stating: 'Once a safety zone is established it will be for the developer to decide how to police and enforce it. Such arrangements would need to include a means of gathering evidence of infringements of the safety zone in order to support any legal action that might be taken against transgressors.'

A Port of London Authority spokesman says that vessels straying inside the zone will be escorted out by a works boat 'for their own safety', but said no incidents had so far been reported involving severe infringement or legal action.

Navigational instruments?

Two separate radar trials have shown that, as with any strong target, there can be strong side lobes and unusual reflections from wind turbines. Small vessels will disappear behind or near towers, then reappear once clear the other side.

The most recent trial conducted by the British Wind Energy Association and endorsed by the Nautical and Offshore Renewable Energy Liaison Group (which includes the RYA, the MCA and other marine stakeholders), took place at Kentish Flats in the Thames Estuary in Spring 2006.

One third of the 50 assessed transits by shipping found no difficulties spotting vessels within and beyond a wind farm from the deep water channel to the north. Few ship's masters had serious concerns with occasional spurious returns, most of which were caused by reflected echoes from other passing ships or from structures near the vessel's own scanner installation.

Wind farms have no adverse effects on GPS, AIS, magnetic compasses, VHF or mobile phone signals, according to tests by the defence lab QinetiQ and the MCA.

Search and rescue procedures

The MCA has made a number of recommendations to all wind farm developers with regards to safety and search and rescue procedures. An important demand was that each individual tower be controlled from the shore with the ability to brake the blades of each turbine in a 'Y' position and prevent the hub, known as a nacelle, from yawing. In theory this would enable a helicopter to hover within reach of the top

WIND FARMS: WHAT'S HAPPENING, WHERE...

Ref	Round	Name	Region	Status	Construction start date	No. of turbines	Company
1	R1	Kentish Flats	Thames	Operational	Jul 2005	30	Vatenfall
2	R2	Thanet	Thames	Offshore work started	Feb 2009	100	Vatenfall
3	R1/2	Gunfleet Sands	Thames	Offshore work started	Sep 2008	48	Dong
4	R2	London Array	Thames	Onshore construction started	Mar 2011	271	E.ON / Dong
5	R2	Greater Gabbard	Thames	Onshore construction started	Jan 2010	140	SSE / RWE
6	R1	Scroby Sands	East Anglia	Operational	Jul 2004	30	E.ON
7	R1	Lynn & Inner Dowsing	The Wash	Operational	Jan 2007	54	Centrica Renewables
8	R2	Docking Shoal	The Wash	Environmental Impact Statement submitted	unknown	100	Centrica Renewables
9	R2	Race Bank	The Wash	Environmental Impact Statement submitted	unknown	100	Centrica Renewables
10	R2	Lincs	The Wash	Planning consented	unknown	120	Centrica Renewables
11	R2	Sheringham Shoal	The Wash	Onshore construction started	2010	88	Scira Offshore Energy Ltd
12	R2	Dudgeon	The Wash	Application for planning consent	2011*	168	Dudgeon Offshore Wind Ltd
13	R2	Triton Knoll	The Wash	Environmental Impact Statement submitted	2014	286	nPower renewables
14	R2	Humber Gateway	Humberside	Application for planning consent	2011*	83	E.ON
15	R2	Westernmost Rough	Humberside	Environmental Impact Statement in development	unknown	65	Dong
16	R1	Teesside	North-east	Consented	2010	30	EDF / Northern Offshore
17	Prototype	Blyth Offshore	North-east	Operational	2000	2	E.ON
18	Prototype	Beatrice	Moray Firth	Operational	2007	2	Talisman
19	R1	Robin Rigg	Solway Firth	Offshore work started	2008	60	E.ON
20	R1	Ormonde**	North-west	Consented	Jan 2010	30	Eclipse Energy
21	R2	Walney	North-west	Consented	Mar 2010	102	Dong
22	R2	West of Duddon	North-west	Consented	2011*	140	Scottish Power
23	R1	Barrow	North-west	Operational	2006	30	Barrow Offshore Wind Ltd
24	R1	Burbo Bank	North-west	Operational	2007	25	Dong
25	R2	Gwynt y Mor	North Wales	Submitted planning docs	2011	250	nPower renewables
26	R1	North Hoyle	North Wales	Operational	2003	30	nPower renewables
27	R1	Rhyl Flats	North Wales	Operational***	2009	25	nPower renewables
28	R1	Scarweather Sands	South Wales	Postponed	since 2005	25	E.ON

* Estimated

** Combined gas and wind site

*** Producing electricity by end of 2009

of a turbine and lift a casualty to safety.

Further recommendations included:

- Numbering and lighting each turbine tower above the waterline so mariners can locate themselves in a Mayday call
- Allowing access to the platform and the nacelle from sea level for potential use as a shelter for a casualty awaiting rescue
- Developers should fund training for local rescue services
- Towers should be marked vertically at 10m intervals to enable helicopter pilots to hover within a wind farm

Best avoided?

The 2009 *Reeds Nautical Almanac* advises staying clear of wind farms 'at all times'.

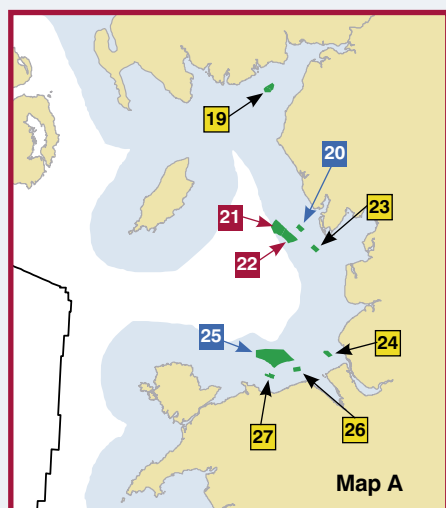
The general advice section continues:

'There is rarely any reason to enter a wind farm. Any emergencies while in a wind farm will probably require outside assistance: a Pan Pan or Mayday call.'

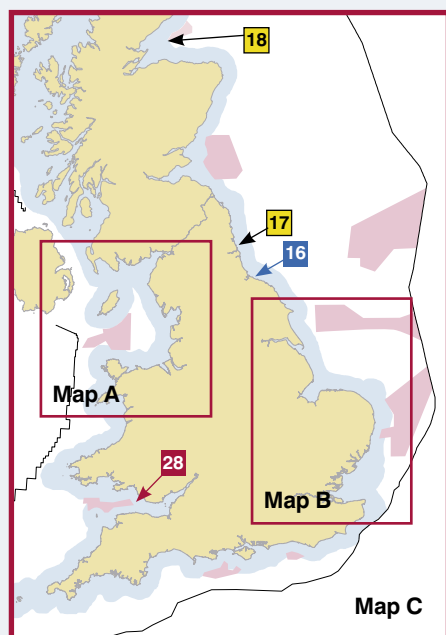
The concern for the RYA is that by frightening people off navigating through a wind farm, a situation may arise where a boat seeking a harbour of refuge is caught on the 'wrong side' of a wind farm and its skipper is then too scared to pass through it, even though it would be the quickest route to safety.

The RYA research indicates that many mariners would be happy to transit a farm in favourable conditions but that unfavourable conditions would lead

... AND WHEN



Map A

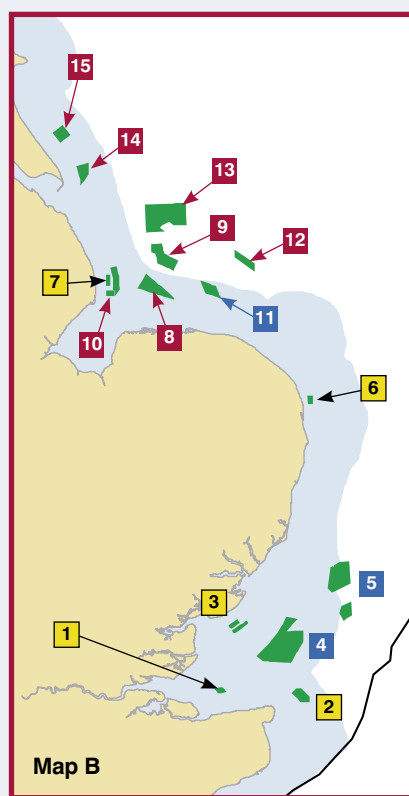


Map B

Map C

KEY

- Operational or offshore work begun
- Onshore work begun or scheduled
- Possible future developments



Map B

Map A: The North West has the largest number of operational turbines with just two stalled proposals. Mainly grouped in a North Wales cluster and a cluster off Barrow, Round 3 development could be significant

Map B: The East Coast is broadly split in two clusters: the Thames Estuary and the Greater Wash. The largest number of stalled proposals is in the Greater Wash where Round 3 development opportunity is also largest. The Thames Estuary is one of the busiest shipping areas in the world

Map C: Pink areas represent zones within which developers may propose Round 3 wind farms, some of which could be twice or three times the size of anything built so far

yachtsmen to avoid the site thereby extending the time at sea and increasing the risk of danger.

The MCA guidance for developers states categorically: 'a consent cannot be granted for an offshore energy installation which is likely to interfere with the use of recognised sea lanes essential to international navigation'. It also warns developers to assess the consequences of deviating vessels from their normal routes which might encourage the crossing of shipping channels or create choke points.

The RYA has produced a cruising atlas for showing developers where regular racing, cruising and transiting points for leisure boaters lie. It has also stressed that

recreational navigation already tends to avoid the main shipping routes on the grounds of safety.

Dick Holness, one of the authors of the *East Coast Pilot*, told PBO: 'So far the farms are not getting in the way of yachting, nor do I particularly think they are a danger to the average yacht being sensibly skippered.' But he complains that marine traffic is likely to get more and more crowded: 'Wind farm development is steadily cluttering up a busy sailing area and will continue to reduce the amount of ocean available.'

The London Array, in particular, has come under fire for potentially blocking a swatchway known as Foulger's Gat.

Although the developers did adapt their plans, Dick's opinion is that swatchways tend to move 'and one can imagine that eventually it could become non-viable'.

PBO reader Nathan Whitworth, who writes a regular blog on his circumnavigation of the UK in his M&I Corribee, *Kudu*, said: 'At sea, they are a pain. I've been in a situation where directly in my path is a wind farm, and so I have to alter course. But on the plus side, they are an aid to navigation when features onshore are hard to pick out.'

This view that the farms can be an aid to navigation is backed up by the *Reeds Nautical Almanac* as well: 'The wind turbines give early visual warning of where the intervening navigable channels lie. Thus they may assist rather than hinder the navigator.'

In Ireland, the Arklow Sailing Club organises an annual 34NM turbines yacht race, circumnavigating Arklow Bank Wind Park. Sited on the shallows of Arklow Bank in the Irish Sea, the park was Ireland's first offshore installation and is now host to just seven turbines after a further 193 in the second tranche of the project were shelved.

Decommissioning

The Energy Act 2004 stipulates that developers must have a strategy as well as funds put aside for decommissioning work, although, unless offshore wind becomes completely unviable economically, it's hard to see why old turbines wouldn't simply be replaced by new ones. The RYA and MCA concur that decommissioned installations must be removed back to the level of Chart Datum, though there may yet be a debate with nature conservation lobbies keen to leave certain obstructions in place as wildlife havens.

Have your say

Consultations are the key to getting your opposition or support noticed in the planning stages of new wind farm developments. Developers agree terms with stakeholders, including the RYA and the MCA, to try to overcome objections before submitting their proposals to the local councils and the Department for Energy and Climate Change (DECC). Reporting observations to the RYA could help influence their input at the pre-planning stage, but the mandatory three-month public consultation is an opportunity to make submissions of your own.

For Round 3, DECC did a Strategic Environmental Assessment (SEA) and made its recommendations, which the RYA then commented on earlier this year.

'The Crown Estate, which holds the rights to lease the seabed for this development, should be paying heed to the recommendations of the SEA,' said the RYA's Kate Moore. 'But thus far they don't appear to have paid much attention. When it's known exactly which areas within the zones are being licensed for development, we will submit our comments and concerns on each application.'