

dti

Marine Renewable Energy Research - UK Government RAG Strategy and Progress

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What is RAG?

- A cross UK government Research Advisory Group - since 2003
- Facilitates a co-ordinated approach to addressing the key environmental issues for all marine renewable energy
- DTI, Defra, DfT, CE, SEA, theme leaders

How RAG works

- Terms of reference
- Regular minuted meetings
- Theme leaders
- Prioritised research topics
- Competitively tendered
- Stakeholder input to review of draft reports
- Study results publicly available
- Website

RAG milestones

- Compiled list of issues and concerns raised about marine renewables – initially just wind, now includes wave & tidal stream
- Now a combined RAG & COWRIE list
- Cross membership of RAG & ETWG
- Series of reviews, studies and other activities initiated
- Programme manager - 2006

Aerial Surveys for Birds

- R2 areas
- 2004-2005
- 2005-2006



Marine Navigation GIS Database

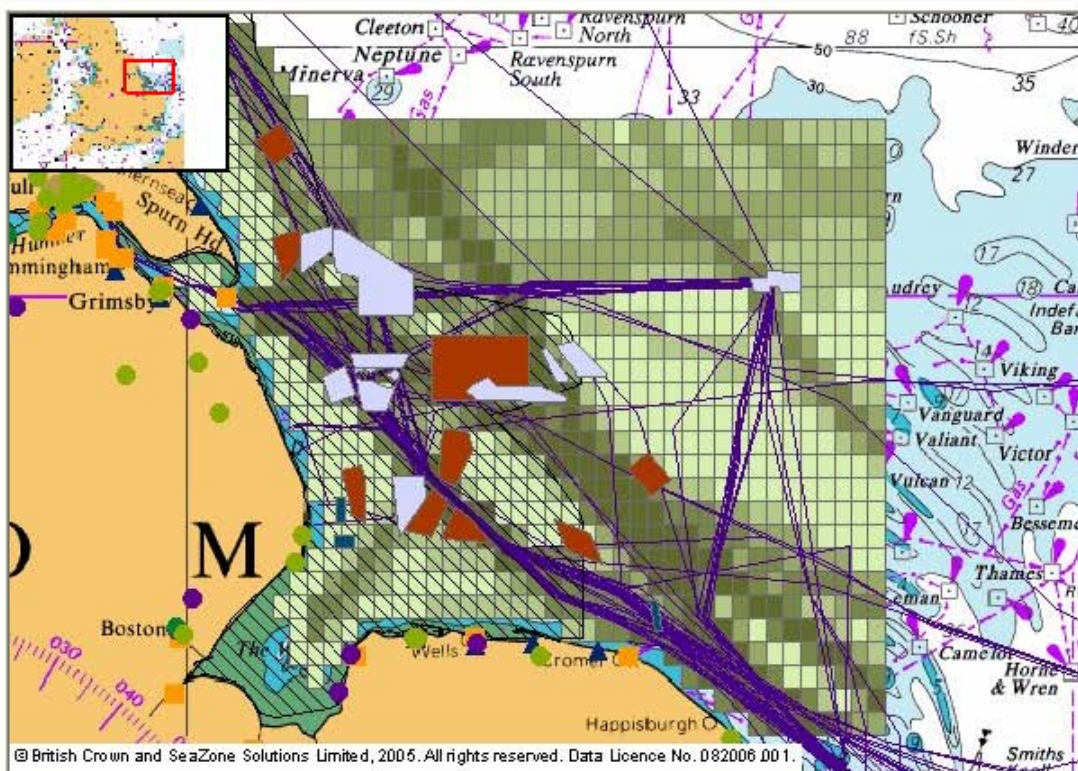
- An online GIS of navigation and other maritime data for 3 R2 strategic areas
- Framework allows for future geographic expansion (UKCS)
- www.maritimedata.co.uk

Data providers

- DTI (project sponsor)
- MCA (AIS & radar shipping survey data)
- DfT (ports data)
- DEFRA (fishing data)
- RYA (recreational activity layers)
- UKHO (charts)
- BMAPA (dredging data)
- Crown Estates (dredging & wind farm areas)
- Anatec (shipping data)



Toolbar



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DredgingAreas

Rec	LOCATION	REGION
1	441/2	Humber

Data

- All Layers
- Dredging
 - Routes
 - Areas
- Fishing
 - FishingVessels
 - FishLandings
- Ports
 - Ports
- Radar Data
- Renewables
 - Round1
 - Round2
- Recreational
 - Clubs
 - Marinas
 - Training
 - Racing
 - Routes
 - light
 - medium
 - heavy
- Sailing
- ShipRoutes
- AIS
- Shipping Density
- Charts
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Other Completed RAG Projects

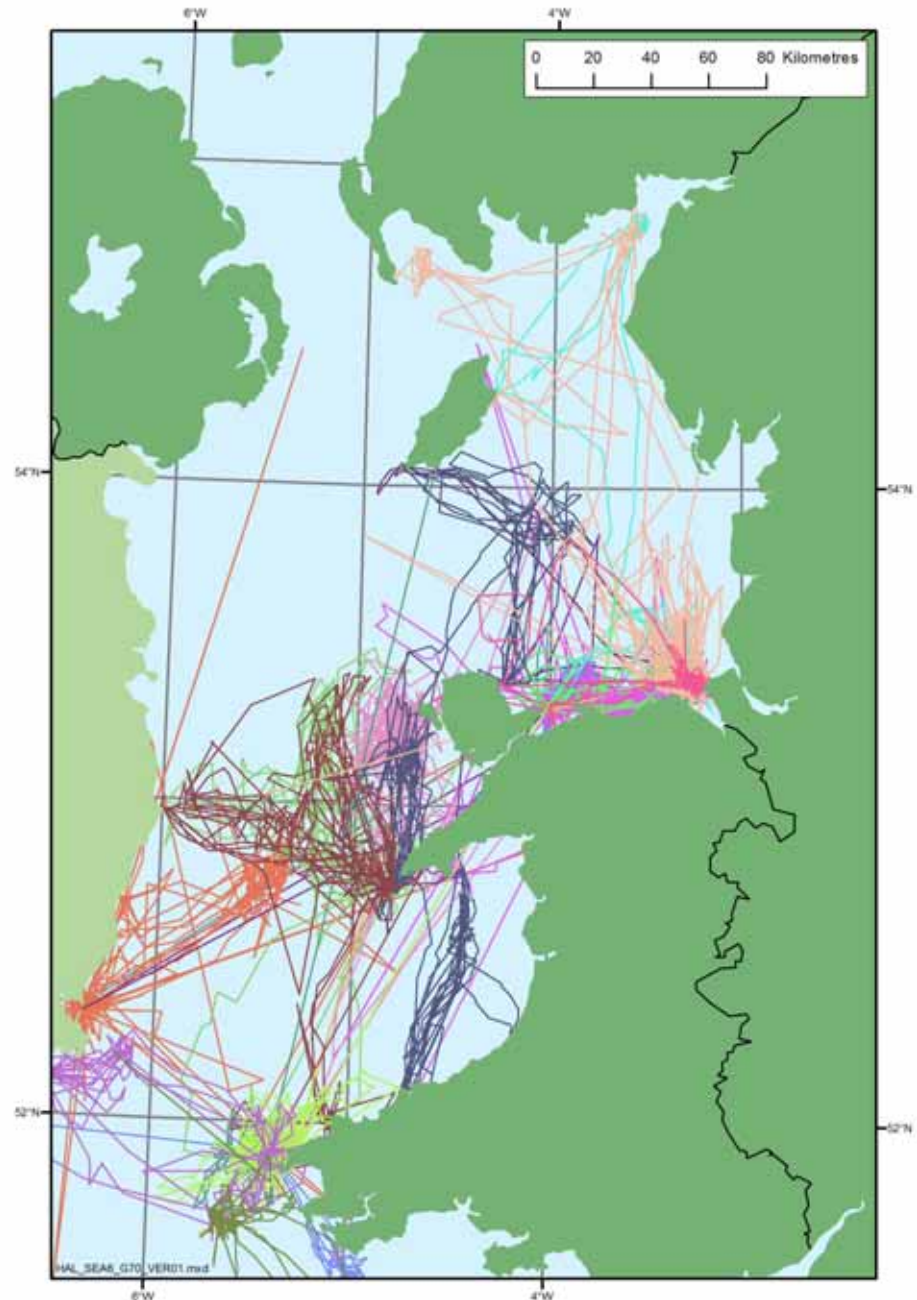
- Guidance on windfarm visual impact assessment
- Methodology for assessing marine navigation safety risks of windfarms
- Boat based training for bird surveyors
- Windfarm decommissioning financial security study



RAG Projects Underway

- Radar trials in wind farms
- Review of cabling techniques & effects
- Review of reef effects of offshore windfarm structures and potential for enhancement and mitigation
- Review of Round 1 sediment process monitoring data – lessons learnt
- Review of navigation channel migration
- GPS location tags to monitor seal interactions with tidal stream turbine
- Energetic costs of barrier effects on birds

Grey seal satellite tracks (SMRU)



Future RAG Projects

- Strategic reviews of potential environmental issues for marine renewable developments
- Reviews of monitoring data from renewable developments
- Studies to contribute to SEA baseline understanding
- Development of techniques and methodologies

Future RAG Projects Selection Guided by:

- Wave and tidal stream research strategy
- Combined RAG/COWRIE list
- Stakeholder input e.g. OREEF
- UK & other experience of marine renewable demonstrators & developments
- Information needed to inform policy

Challenges and Opportunities

- More solid evidence needed of effects & context of natural variability
- Opportunities to study new technologies are few
- Numerous initiatives & funding sources
- Coordination and Cooperation
- Balance of effects - local vs global