# University of Exeter PhD Study

## Participant photography:

## Bringing local values into energy projects

## Method

Renewable energy projects (such as wind farms) frequently encounter opposition from local communities, often over the way in which such projects are seen to threaten particular values associated with their place: for instance, wind farms can be seen as 'industrialising' natural areas, or being a blot on the landscape.

- Therefore, it is important to understand what is valued about particular places, which helps in designing local energy projects that 'fit' such local values, and are therefore supported by the local community.

- One way of gaining a better understanding of such locally-relevant values is to ask local residents to photograph what they value about where they live, and to interview them about their photos. This was done with 28 Guernsey residents, who were asked to **take up to 10 photographs of what they value about Guernsey's coast and sea** within one week. 200 photographs were taken, some of which are shown on and around this poster.






## Results

Energy projects that are seen as making Guernsey **more unique** by using a locally distinct resource (the tides) are more widely supported than those seen as making Guernsey more like everywhere else (e.g. wind energy)

Local people who represented the coast and sea as a space to be **utilised** (for leisure, to explore new places) were also more supportive of using such spaces for offshore energy development

Places used to enjoy Guernsey's **sunsets and sunrises** are seen as unacceptable locations for offshore energy development

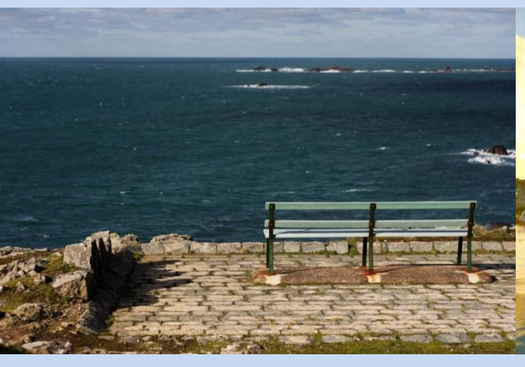
Places associated with **wildlife** were seen as unacceptable locations for local energy projects

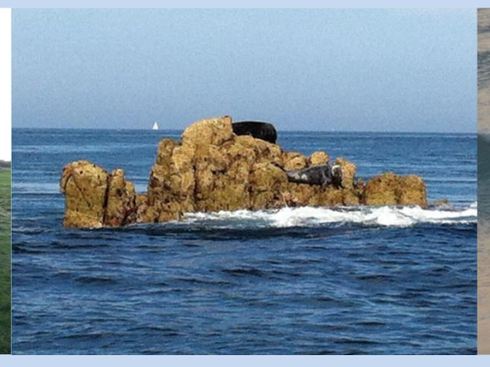
Places associated with **natural beauty** were less acceptable as locations for offshore energy development

Guernsey's coast was seen as a **quiet place** to escape the busy island itself – local energy projects that threaten such values may be less acceptable locally

Some places are **very special** to people – such places are likely to be less acceptable as locations for local energy projects

Energy projects seen as making Guernsey **more independent** and self-sufficient were well-supported



## Conclusion

- Asking local residents to think about, and photograph, those things that they value about 'their' place can be a very effective way to start a discussion about potential future changes to this place (i.e. local renewable energy projects).

- Both local values associated with support (e.g. independence) and opposition (e.g. natural beauty) can be identified using this participant photography.

- Therefore this method can help in ensuring renewable energy projects take into account such local values at an early stage of project design – reducing the risk of public opposition emerging in later stages.

- This participant photography approach offers a different way of engaging with local energy projects – as it does not take a pre-designed energy project as its starting point, but instead draws on what is deemed important about a particular place to identify *what kind of* local energy project may be supported locally. It thus has the potential to play a more constructive role in processes of public engagement and designing local energy projects.

- When using this method, care needs to be taken to also capture non-photographed values and places.

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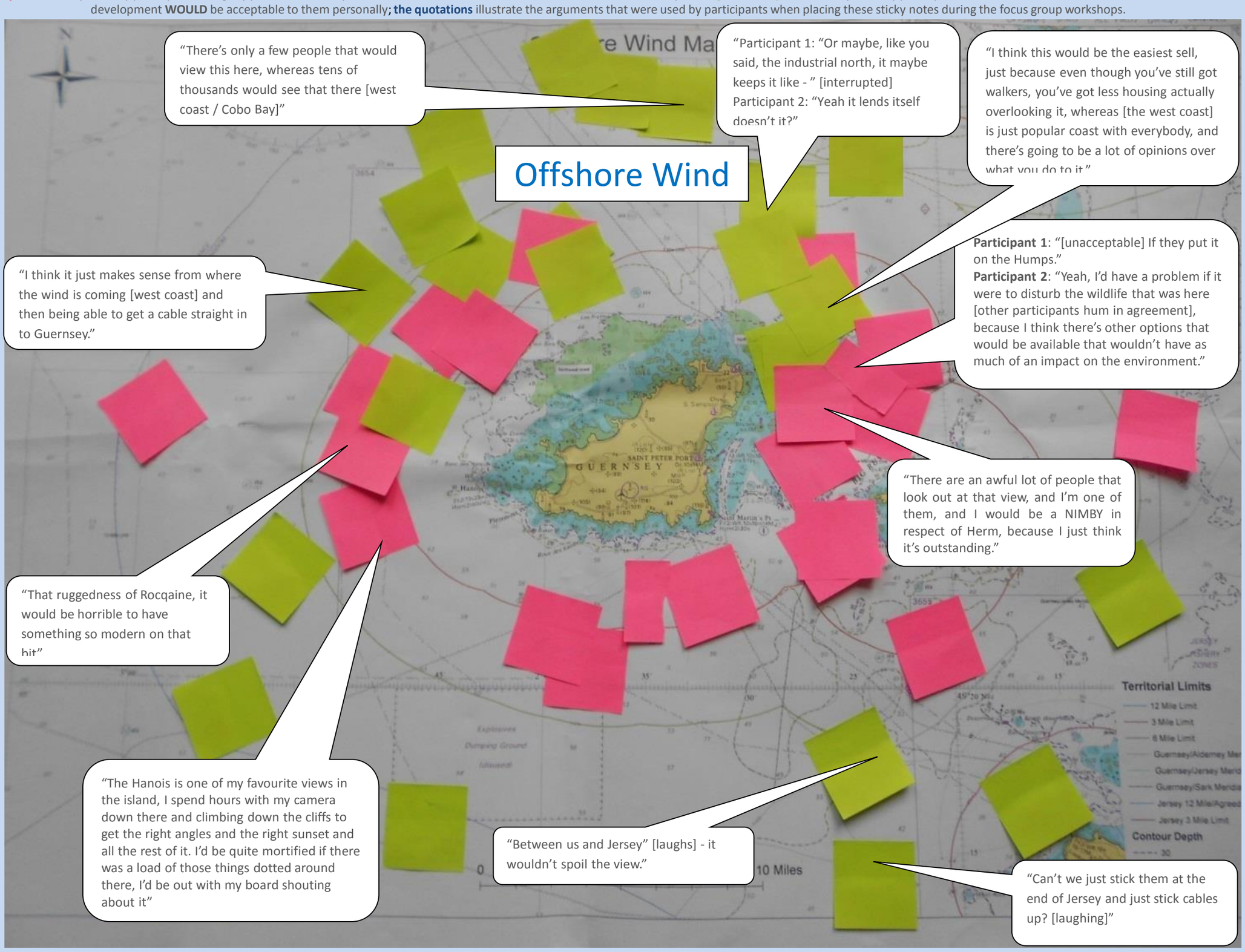
# University of Exeter PhD Study

## Discussing maps: Finding 'acceptable' and 'unacceptable' locations for <u>offshore wind and tidal energy projects</u> in Guernsey

**Red sticky notes** were placed by participants to signify places where they **would NOT** want to see an offshore wind farm or tidal development; **green sticky notes** were placed by participants to mark locations where an offshore wind farm or tidal development **WOULD** be acceptable to them personally**; the quotations** illustrate the arguments that were used by participants when placing these sticky notes during the focus group workshops.

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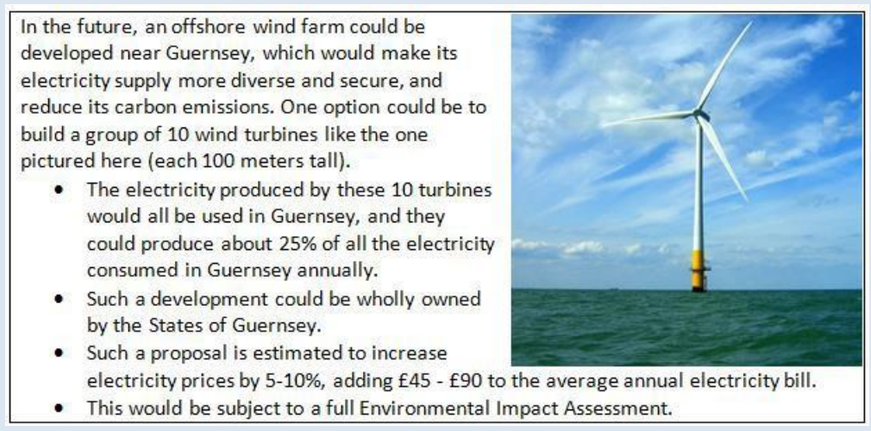
# University of Exeter PhD Study

# Using maps in questionnaire surveys

## Methodology

The third study conducted as part of this research project built on the first two studies (the participant photography and the map-based study) by using a questionnaire survey to investigate public acceptability of offshore wind and tidal energy across the wider Guernsey population. Within the questionnaires various options were investigated, including two hypothetical (but realistic) future energy projects for Guernsey were outlined:

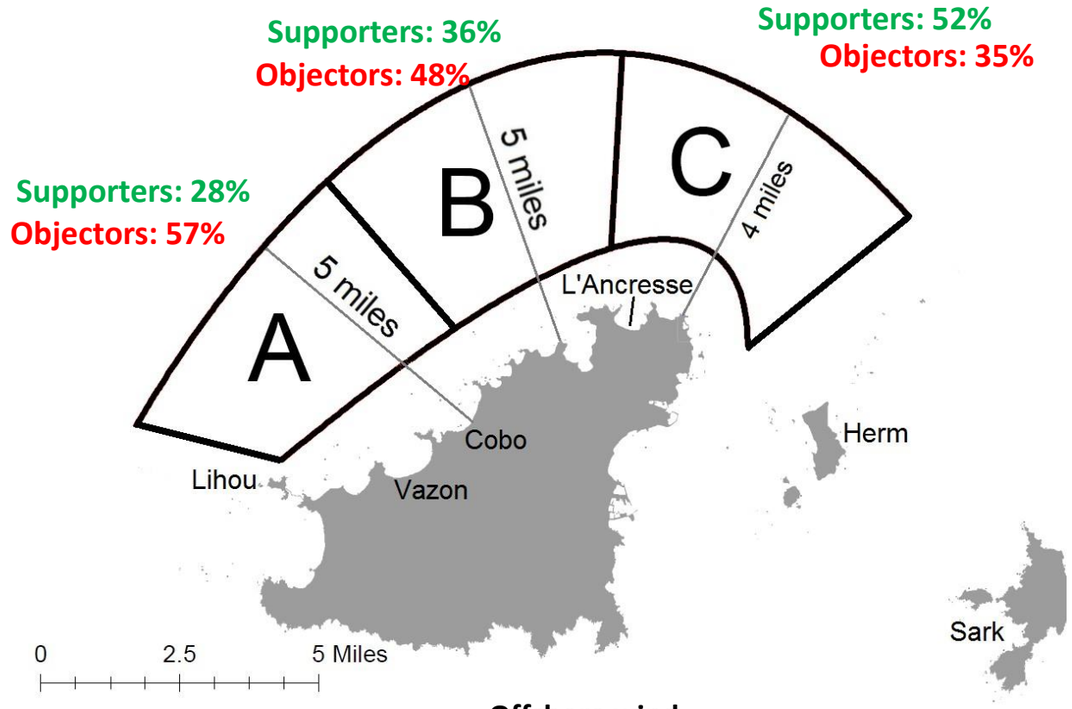
**A 10-turbine offshore wind farm:**




**And a 25-turbine tidal energy project:**


Participants were asked whether they would support these two projects – without specifying the exact location where they would be located. Next, the questionnaire presented three areas around Guernsey that would be potentially suitable to host such a local energy project – see maps below. Participants were asked to what extent they would support such a wind/tidal energy project in each of these zones.

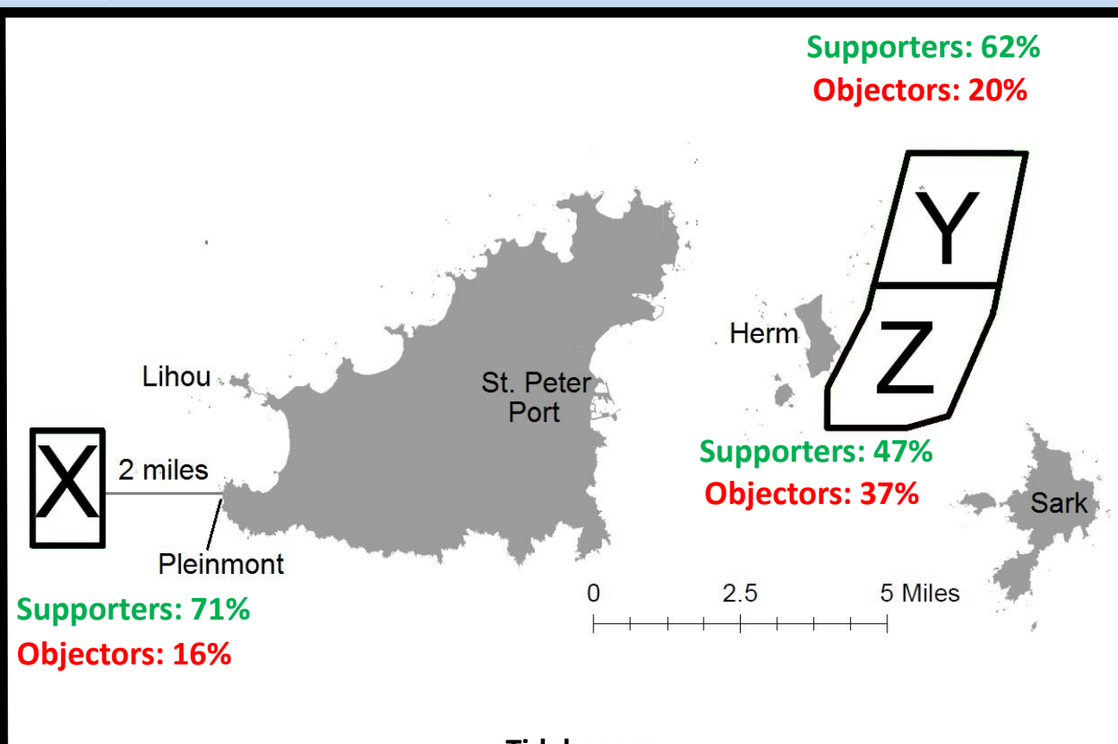
## Results




**Offshore wind**

The offshore wind project was supported by 51% of respondents (29% objected, 20% neither supported nor objected).

However, depending on the location where such a project would be sited, levels of support change significantly (see figures above): Only 28% would support this wind farm if it was located within zone A (57% would object), while zone C is the most popular zone (52% of respondents would support the wind farm if sited in this zone).




**Tidal energy**

The tidal energy project was supported by 62% of respondents (15% objected, 33% neither supported nor objected).

If sited in zone X, local support for this tidal energy project increases to 71% in support. However, only 47% would still support this tidal energy project if it was to be sited in zone Z – suggesting that (like for the offshore wind project) public support for tidal energy development depends strongly on *where* it is sited.

**What this suggests is that a relatively less popular but well-sited energy technology (i.e. wind energy in zone C) is more widely supported than a better – supported technology that is sited in a less desirable location (i.e. tidal energy in zone Z). This means it is very important to acknowledge such public preference at an early stage of the design of local renewable energy projects, if local acceptance is to be achieved.**

## Conclusion

This study shows that within local communities important preferences exist for particular technologies over other technologies, and for the locations where such technology should or should not be developed. It also highlights that even technologies that are well-supported and seen as adding to the distinctiveness of a place (see the participant photographs earlier in the exhibition) may still be relatively unpopular when sited in the 'wrong' place.

While the engagement exercises using photographs and maps – as reported earlier in the exhibition – were very useful in exploring the variety of place-related meanings in greater depth, this study suggests that visual methods, such as maps, can also be used very effectively in quantitative approaches such as questionnaires – especially when such maps are based on earlier exploratory, qualitative work.

Future community engagement exercises using this particular method need to reflect carefully on how to present multiple locations to respondents – in this study rather large zones were presented, which were unable to pick up on the nuances of siting preferences *within* these zones. Therefore, these results provide insights into approximate acceptability of different broad (rather than specific) coastal areas.

More information on the study, including statistics around each question, is available from the following web page - http://www.guernseyrenewableenergy.com/downloads/Working-with-Universities.aspx.

This also includes information on all 3 studies undertaken in Guernsey as part of the PhD.

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# RET work – Past and Present

RET has undertaken a significant amount of work looking into the environment around Guernsey as well as the local renewable resources and the renewable industry, and continues to do so.

RET has published a number of documents on their website, including some of those listed below:

- Regional Environmental Assessment of Marine Energy

  The Regional Environmental Assessment (REA), undertaken in 2009, was a desk based environmental assessment of the potential impact of renewables in Guernsey. The work identified potential impacts, mitigations and data gaps for further investigation.

- Benthic (seabed) Towed Camera Survey – Characterisation of the Benthos (seabed environment) in the Big Russel

  The survey took place in 2010 and was undertaken with PRIMaRE/Plymouth University using a newly developed towed camera method, trialled for the first time in a higher speed tidal regime. The method was developed specifically to survey benthic communities at renewable energy sites.

Images from the Big Russel Survey 2010

- Wave and Tidal Prefeasibility Report

  To understand the potential for wave and tidal development in Guernsey at a high level. It was concluded that the waters around Guernsey have potential commercially exploitable resources in the form of wave and tidal stream energy.

- Status of Wave and Tidal Energy Technologies

  Continued monitoring of the wave and tidal industries to allow Guernsey to utilise the natural resources when the industries are ready.

- Wind Wave and Tidal Resource Mapping for the Territorial Waters of Guernsey

  Undertaken significant amounts of work identifying the resource potential within Guernsey's waters. This has included empirical data collection and numerical modelling techniques. RET continues to refine this information to better inform decision making.


- Feasibility of Offshore Wind Energy

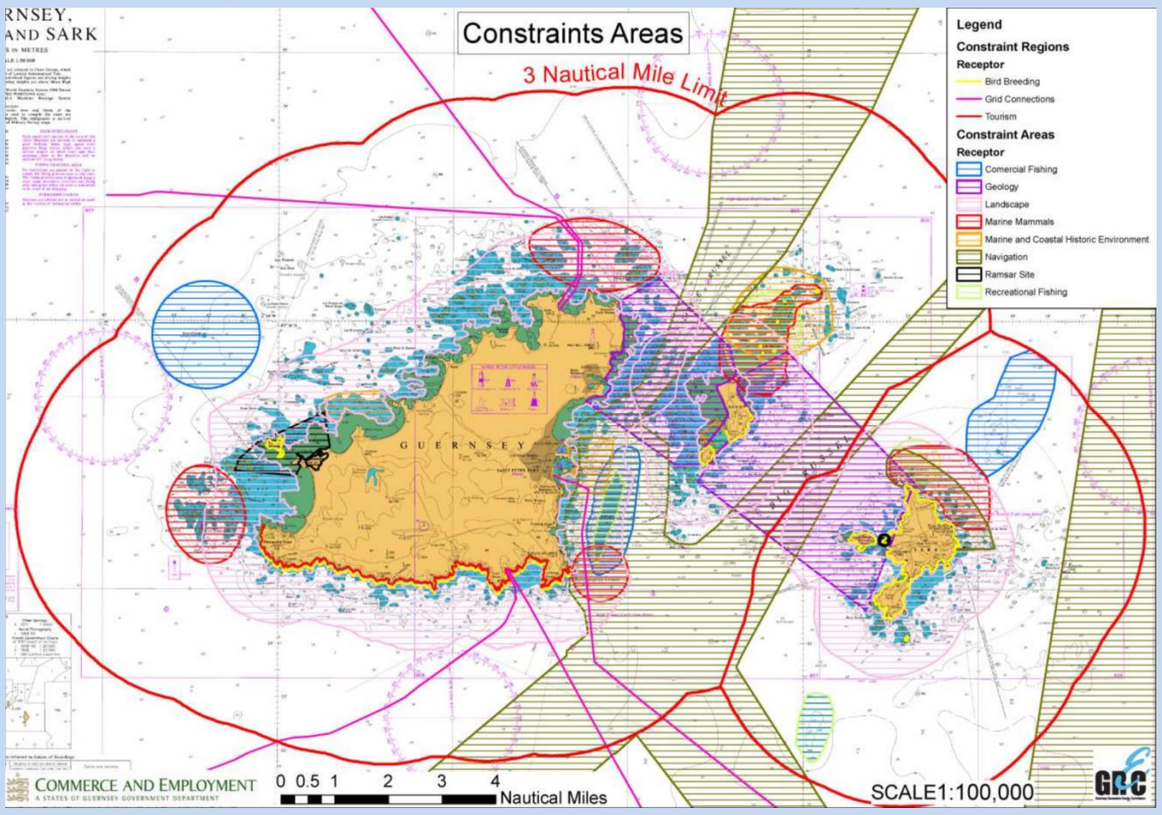
  Undertaken work, including wind monitoring at Chouet, to better understand the resource. RET are currently undertaking a detailed feasibility of a small offshore wind development for Guernsey only consumption.

- RET Strategy

  A long term strategy that is reviewed and updated annually. Additionally the previous year's achievements are also documented.

- Provisional mapping of the marine environment using GIS

  Undertaken an initial mapping exercise utilising all data available to the States of Guernsey, which is updated as more data becomes available. This mapping exercise will ultimately be used for zoning of renewable energy and other States of Guernsey marine definitions. RET are always happy to accept new data, no matter the format, to improve the accuracy of the mapping.




- Public Engagement – Perception of Marine Renewable Energy

  Undertook a public perception PhD between 2012 and 2015 (on which part of this display is based) looking to understand the views of the Guernsey public. RET are keen to engage with the public and will continue to communicate on projects and renewables generally.

- Identifying feasible financing strategies

  Funding of renewables for Guernsey has a number of issues, not least the potentially small scale of any development. As such RET has investigated a number of feasible financing options.

- How Renewables interact with other areas

  Renewables will inevitably have an impact on other activities, therefore it is important that they are identified and quantified as early as possible.

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