Public acceptability of offshore renewable energy on Guernsey
PhD research Bouke Wiersma (University of Exeter), study 2
Summary for States of Guernsey Renewable Energy Team, June 2015

This document outlines the second study carried out as part of the PhD research of Bouke Wiersma, at the University of Exeter, which has been supported by the States of Guernsey's Renewable Energy Team. This second study aimed to build on two key findings from study 1: 1) that many different ideas and expectations circulate within Guernsey on the likely manifestation of future offshore wind and tidal energy projects in Guernsey (e.g. visually, technology type) – shaping people's opinions and representations of these technologies; and 2) that many residents seem to have strong opinions on the acceptability of different locations for offshore wind or tidal energy development. This study aimed to better understand both aspects, by investigating how public responses to tidal and offshore wind development are formed or transformed upon the provision of more detailed information on how these technologies might be implemented in Guernsey. Secondly, it also aimed to further explore the acceptability of different locations around Guernsey and the associated arguments by using a map-based task, which is explained in the next section.

Methods

Four 2-hour focus group workshops were held in June 2014 at Les Cotils in Guernsey (see image), with 5-6 participants each. 14 out of the 22 participants also participated in study 1; 8 new participants were recruited. The participants represented a good spread of age, gender, and place of residence across the island (although only a few lived in the north). Most participants were keenly interested in renewable energy, and therefore the sample is unlikely to be fully representative of the wider population. The workshop protocol consisted of three parts: 1) a general introduction which included information on Guernsey's current energy system, 2) a section on offshore wind, and 3) a section on tidal energy. Discussions on offshore wind and tidal energy followed the same structure, where first of all participants were asked where they expected any future development to be sited. Next, details of the technology (cost, visuals, etc) were provided by the researcher, prompting discussions on participants' concerns and opinions. The next step was a task where every participant was asked to place one green and one red sticky note on a large map of Guernsey to signify the location most and least acceptable to them for development of these technologies, leading to further deliberations. Finally, a map was revealed and discussed that showed sites that may be suitable for development of these technologies (based on information from the Renewable Energy Team).

**Results**
Observations from the discussions
First of all, participants were commonly very surprised by the information about tidal energy technology; in particular in relation to its visual appearance (it was expected to be less visible), its readiness (based on Alderney's perceived progress there was a general expectation that the

technology is ready to be installed), the benefits it will bring to Guernsey (even after they were told of the current price of tidal, a strong sense of that it can be 'very lucrative' to Guernsey prevailed), while the location generally expected included both the Big and Little Russel. For offshore wind energy, participants were instead most surprised about the spread of potentially suitable locations, as virtually everyone expected the West coast to be the most suitable site. They were also 'positively surprised' by the proportion of local energy demand that could be met by 10-15 turbines. Less surprise was expressed about wind's visual appearance and costs. In other words, clearly public opinion on each of these technologies is already informed by certain representations of the technologies. The broadly positive associations with tidal energy and the broadly negative expectations of wind energy were challenged by the information presented during the workshops, and this led to a shift in opinions; in two of the groups, a preference for offshore wind energy over tidal energy emerged as a consequence of the information provided and ensuing discussions.

Secondly, the design of this study encouraged participants to discuss wind and tidal in the context of the wider energy system, which was done frequently. Alternatives, like cable connections to France, solar panels and demand side measures were talked about almost constantly, for example during the coffee break and after the workshops, suggesting participants felt strongly about these alternative energy technologies. This is important, as it highlights that public acceptability of a particular development is likely to be shaped in part by debates, ideas and perceptions around the wider energy system – in particular those that may be seen as superior alternatives.

The map-based task: results

This task led to lively, rich discussions, which suggests that the siting of these offshore technologies is an important issue to local people. The map on the right represents a summary of each of the offshore wind acceptability maps produced by the four groups (so four maps are summarised into one by the researcher). It shows a pattern of green markers generally being further away from the shore (i.e. further away is broadly seen as more acceptable), with some specifically placed towards Jersey, but very few placed off the south and east coast, and the majority instead placed off the north ('few people go there for the views', 'the Industrial North') and the west ('it has to be where the best resource is'). The red sticky notes, representing unacceptable locations, are concentrated off the east and south coast.
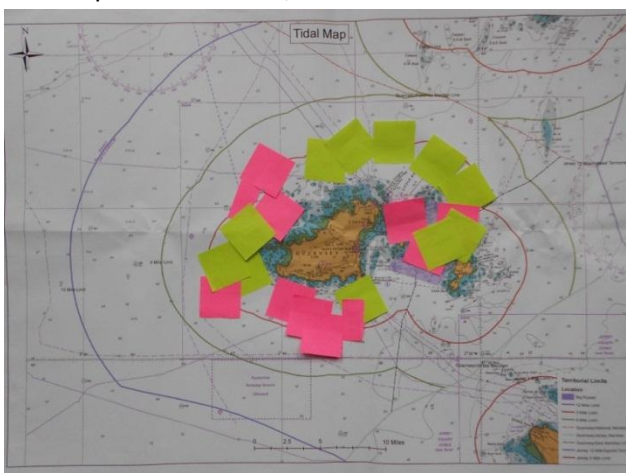
For tidal energy, only three groups produced a map, as one group presumed it could only be in the Russels. The map on the left represents a summary of the three maps that were produced. The main difference with the offshore wind map is that the notes are all placed close to shore – a result of the previous discussion highlighting that is where the currents are strongest. Otherwise, a broadly similar pattern emerged of a highly acceptable north coast site and unacceptable east, south and west coast locations.

<u>The map-based task: arguments employed</u>
A variety of arguments were employed by participants to explain why they labelled some places as acceptable and others as unacceptable; these can be broadly summarised as capturing four kinds of argument.

Firstly, there was broad agreement that both the wind and tidal technologies shown during the workshop were not visually appealing (except for the underwater tidal option), and that they should be kept out of the way of the most beautiful places, while also avoiding places that are good for watching sunsets and sunrises. However, it was also suggested that tidal energy turbines were more suited to visually fit in in areas like the Russel, where there already are various landmarks, maritime objects and islands, while the slim and tall wind turbines were judged to be more visually suited for areas of open sea, in particular to the north of the island.

Secondly, the technologies were commonly represented as 'modern' and 'industrial', which was talked about as not fitting certain places that were seen as 'unspoilt' and 'rugged' (e.g. Rocqaine). The same narrative was applied to portray the north of Guernsey as more suitable due to its perceived industrial nature – especially in those focus groups without any participants from the North, suggesting this argument may be used particularly by those from other parts of Guernsey.

Thirdly, while some participants employed an individualistic narrative ('I live in the south so I put [my sticky note] to the north'), other emphasised a more collective approach: they identified areas that were perceived as being used by fewer people as the most suitable areas ('no-one goes there [Chouet] for the views'). This means that aside from meanings ascribed to places themselves (their beauty or naturalness), ideas about how often they are used are also relevant in shaping acceptability of energy developments in these places.

Finally, some sticky notes were placed based on ideas of where the technology would be most efficient – this led to the placement of a number of green sticky notes in the Russel for tidal energy, and off the west coast for wind energy. Moreover, some red sticky notes were placed in the Russel as some participants felt this was an untenable location due to the boat traffic in this area.

Conclusion
In terms of common sense lay knowledge about tidal and offshore wind, strong but widely diverging ideas seem to exist and to actively shape public judgements of their acceptability. Provision of information may to some extent alter public acceptability or at least understanding of these technologies, but this study also suggests that some ideas may remain influential, even if contradictory information is provided (e.g. on tidal energy's potential for bringing money into the island). This is important to recognise, in designing and managing expectations around any communications around potential future developments in this area.

In terms of finding a publicly acceptable location for offshore energy projects, broadly speaking the east and south coasts are very unpopular, while areas off the north coast and off the southwest coast seem to be more widely acceptable. In arguing for and against these places, participants spoke of the need to site the technologies away from the most beautiful, natural and popular places, while arguing that less-popular places, and those of a more industrial or modern nature were more suited. An understanding of these preferences and arguments may be utilised in designed a more publicly acceptable offshore energy project, while also informing the communication of such a project and its chosen location to the public.