

## Wind Farm Location Exercise

### **Assessment Task:**

You are a **government expert** on renewable energy. A new wind farm is going to be built in Co Down. You will **study** a range of information about wind energy and Co.Down. You will **select** the best site (from a short list of 4) for the wind farm and then will **write a report** for “The Mounre Observer” (the local newspaper) to inform people of the decision and persuade the local people to agree to the wind farm.

### **Background Activities**

Answer the following questions in your books.

#### Introduction (Resource Sheet 1)

1. Resource sheet 1 says that wind energy is renewable energy. What does this mean?
2. Give a reason why the government wants to get 20% of the UK’s energy from renewable energy by 2020.
3. Describe in your own words how a wind turbine generates electricity.

#### Co Down Wind farms (Resource Sheet 2)

4. Give two reasons why Co Down is a good location in the UK to build new wind farms.
5. Give one reason why some people in Co.Down don’t want more wind farms.
6. Read the section on the wind farm already in N.Ireland. Give two facts about the wind farm that have made it a success.

#### The good and bad points of wind energy (Resource sheet 3)

7. Choose the two things that you think are the best things about wind energy and say why these are so important.
8. Choose the one thing that you think is the biggest problem with wind energy and say why it is such a big problem.

#### Viewpoints (Resource Sheet 4)

9. Find a person that is in favour of building a new wind farm. What is their opinion and why do they hold that opinion?
10. Now find a person that is against building a new wind farm. What is their opinion and why do they think like this?

### **Extra Information**

In order to help you write the report you may want to undertake some extra research on Wind Energy. You can use the following websites as a start for your research.

<http://www.yes2wind.com/faq.html> An excellent website which can answer lots of your questions on wind energy

<http://news.bbc.co.uk/> BBC website with lots of stories from different peoples point of view.

<http://www.dti.gov.uk/energy/renewables/index.shtml> Government website on renewable energy.

<http://www.countryguardian.net/> A conservation group against wind farms

Feel free to search other websites but remember that some are biased towards certain opinions!

**Information on The Sites:**

Site	Site/Land Area	Drainage	Land Use
26,11	A large site found close to the south of Cranfield/Greencastle– approximately 4 sqkm	Moderate	Grazing land for cattle,sheep
15,19	A small site found close to town of warrenpoint– approximately 2 sqkm	Good	Grazing land- pasture
36,25	A large site SE of Newcastle – approximately 8sqkm	Poor	Grazing
38,15	A large site found off the SE coast of Co.Down – approximately 8sqkm		Sea

**Choosing the best site**

Look at the map showing the four different sites. Complete the table below to help choose the best site. Use the following scale to assess each factor (Excellent = 5 Very Good =4 Good=3 Reasonable = 2 and Poor =1)

Factors to consider Site GR	Windiness- high ground or coast	Availability of land (Land Area)	Close to sites of historic or special interest	Accessible for maintenance by road	Distance from settlements	Overall score
26,11						
15,19						
36,25						
38,15						

Use the table of scores for each site as well as your own ideas and the map to choose the best site for the new wind farm. Answer the following questions so you can give a detailed report on the sites for the local newspaper.

1. Which is the best site (highest score)?
2. Explain fully why this site was the best and better than the other 3 sites. (10)
3. Which site was the worst (lowest score)?
4. Give the major reason why this site wasn't suitable for the new wind farm. (2)

Total Mark for Assessment = 12 marks

Your Mark = \_\_\_\_\_

### How will my work be marked?

Assessment Your report will be marked using the following success criteria.

<b>Success Criteria</b>		<b>Unit: Energy</b>		
<b>Skill:</b> Decision making and report writing		<b>Task:</b> Choose a site for a new wind farm and write a newspaper report about the plans. <b>Purpose and Audience:</b> to persuade the local people to support the plans.		
<b>Key:</b> ✓✓✓ Done in detail	✓✓	✓	✗ Not done at all.	
<u>To be successful I need to:</u>		Pupil	Improve?	Teacher
<ul style="list-style-type: none"> <li>• Recognise my role as a government renewable energy expert</li> <li>• Show a good understanding of renewable energy</li> <li>• Choose the best wind farm site and give evidence to support your choice.</li> <li>• Appreciate different people's opinions of wind farms (may include own research)</li> <li>• Write in paragraphs</li> <li>• Write in a style which persuades people of your decision.</li> </ul>				
My targets are to:				
Teacher Comment:				