



**TRITON KNOLL**  
OFFSHORE WIND FARM

**Facilitator's Paper  
for Classroom  
Activities 2 & 3**

## **THEMES:**

**Mapping, Careers in Practice, Climate Change,  
Fossil Fuels and Renewable Energy**

**The facilitator should read out the background story below to set the scene for two of the activities.**

Exercise 1 – Each group is a guild of professionals (pursuing a career explained on the Triton Knoll website). The group work together as a team. Use the map layers and clue sheets to figure out your profession's advice on where it would be best to build a wind farm.

As a class jointly decide where the best location is to build the wind farm.

Exercise 2

Greta's challenge – Which turbine model will you use and how many turbines would you build to meet the electricity needs of an imaginary town?

### **Facilitator's speech:**

*Who in this classroom has heard of Greta Thunberg?*

Greta Thunberg has just arrived by sailing boat from Sweden and is giving a speech at your hometown 'Bottomsrest'.

The Swedish teen environmentalist's speech is powerful and clearly articulates how climate change is the biggest threat to man-kind itself as well as all species on earth. She sets out how you are the last generation to be able to make a change to how global temperatures rise. Drastic changes in the earth's climate are being caused by *greenhouse gas* emissions being released by human activities. The temperature rises are already impacting on the survival of wild animals and plants, people's access to food and water and more frequent extremes in weather are impacting people's health, homes and lives.

Greta highlights that the biggest source of these greenhouse gas emissions today is the burning of fuels to produce heat and electricity.

***You might be wondering – what are fossil fuels? You have all seen at least one type... at petrol stations.***

Crude oil, coal and gas are fossil fuels.

They were formed over millions of years, from the fossilised remains of dead organisms:

- coal was formed from dead trees and other plant material
- crude oil and gas were formed from dead marine organisms

They are when you look at their basic chemistry – made up mainly of carbon and hydrogen.

They burn easily and burning them releases energy.... – which has been harnessed to heat your homes and generate electricity historically. However, burning them releases **Carbon**

**Dioxide** which is one of the key greenhouse gases – as well as other undesirable bi-products.

**Fossil fuels are non-renewable.** They took millions of years to form, but they take mere seconds to ignite, burn and release their energy. We are using them up faster than they can be replaced.

**Greta sets you a challenge:**

Greta leads the towns-people of Bottomsrest – including you fine citizens who have joined the march to the local fossil fuelled power plant. She continues her speech to set you a challenge:

Is it possible for Bottomsrest power station to close down and build an offshore wind farm to replace the fossil fuelled power plant?

The power station has the funds to invest the money it has made over the last few decades to build a new wind farm.

- 1) Can you, the towns-people find a suitable location for the offshore wind farm?**
- 2) Can you build enough turbines to meet the electricity needs of Bottomsrest?**

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Triton Knoll Offshore Wind Careers Activity 2 & 3 hand out sheets provide the detail of the exercises. Please explain in brief any new concepts and terms to your class as needed based on their level of understanding.

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