

Location! Location! Location!

The Growth & Development of Southampton Water

Student Introduction

- ▶ This activity examines the growth of Southampton City and Port, and industry along Southampton Water.
- ▶ When you take your ferry trip you will understand the scale and importance of this geographical area.



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Fawley Oil Refinery

Southampton is a city, in the county of Hampshire, on the south coast of England. There has been a settlement here since the Stone Age, and it has grown and developed since then into a major city, with an estimated population of 253,651 (Office of National Statistics).

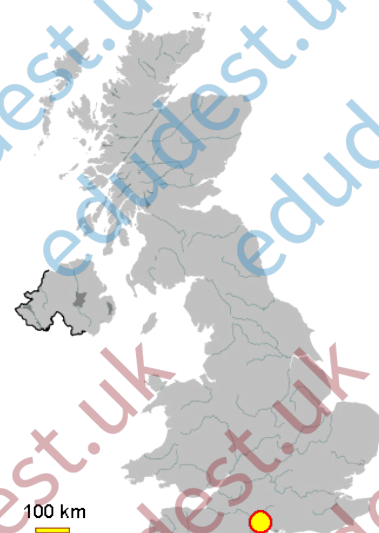
During the activities in this resource, you are going to be investigating the reasons for the development of the original settlement, and look at the human and physical factors that have affected its growth.

You will also be considering the characteristics that have made this a good location for a port, and for industry.

Why this site?

When the Romans invaded Britain in AD43 and conquered the local Britons, a settlement was set up as an important fortress, acting as a defensive outpost to the then capital, Winchester.

Even then Southampton was an important trading port. It is a port with a very long history, and it didn't grow up here by accident; there were very good reasons why this site was chosen for the early settlement.



1 0 7 2 3 2

Come up with at least 5 characteristics that the **site** for your new **settlement** would ideally have!
Write your wish list below!

No.	Characteristic wished for	Extension: reasons why it's important
1		

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3		
4		
5		

Hooray...Found it!

Hooray...you have found a good site for your new settlement, and it is shown on the map with a partner, label the **physical characteristics** of this area which made it a good site for a settlement all those centuries ago!



Extension: Consider the **physical** and **human** factors that enabled the settlement to grow over time. Use a different colour to pick out features/characteristics on the map and add annotations to explain how these helped the settlement to grow. Can you explain any reasons for the *pattern of growth* that you can see?

with a partner, label the



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Class Summary

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You will now share your ideas as a class and complete the table below to summarise the key characteristics which have been important in the development and growth of Southampton and the port.

You could even colour code **physical and human characteristics** in different colours!

Characteristics that led to the development of the settlement of Southampton	Additional characteristics that made this a good location for the development of the port
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Preparing for your Trip

Read and understand the following text which will prepare you for the activities you will undertake during your ferry crossing.

Your Ferry Crossing

You will be travelling from the Red Funnel ferry terminal at Town Quay in Southampton, along the length of Southampton Water, across the Solent and into East Cowes on the Isle of Wight.

As you go, you are going to use a combination of resources provided to you on this activity sheet as well as your own observations to answer the question "Why Here?".

You will consider factors affecting the:

- ▶ Growth and development of the port of Southampton
- ▶ Growth and development of Fawley oil refinery and power station

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- ✓ Four state-of-the-art cruise terminals
- ✓ 1.7 million cruise passengers welcomed each year, making Southampton the UK's main cruise terminal
- ✓ Home to the UK's second largest container terminal
- ✓ 14 million tonnes of cargo (traded goods) pass through Southampton port each year
- ✓ 820,000 vehicles are handled by the port each year (that's almost 2,250 per DAY)
- ✓ All of the food products entering the UK from the Canary Islands comes through Southampton.

So clearly this is a very important port! But why has it developed here, and why has it grown to become so important?

What are the human and physical factors that make Southampton such a good location, and that have allowed it to grow and develop into the major port that it is today?

You are about to find out ... !



Queen Mary 2 – one of the three Cunard 'Queens' in Southampton, May 2015

ON THE FERRY - TASK ONE

Be aware – this document is written as if you are travelling from Southampton to East Cowes. If you are completing it on the return journey you'll need to adjust the order of the tasks.

As soon as you board the ferry, take some pictures of the port facilities around you and of any vessels (e.g. cruise ships) that you can see. It would be a good idea to mark on the map of the port below where each picture was taken so that you remember later!

As soon as the ferry starts moving, a short safety announcement will be given. Pause for a moment to listen to the announcement and understand the evacuation procedure.

Then... Using all of the evidence in the figures below and on the following pages, which give you information on the port's location, complete the table on page 9.

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Figure 1. Map showing the port facilities in Southampton (pink shading).

Figure 2. The physical geography of Southampton Water

Southampton Water is a geographical landform called a Ria. A Ria is, effectively, a “drowned” river valley. At the end of the last Ice Age (20,000 to 6,000 years ago) sea levels rose dramatically as the ice sheets melted. Many valleys in the south of England were flooded at this time.

The estuary of the rivers Test, Itchen and Hamble were flooded far inland, and it has created a very wide and deep estuary now known as Southampton Water.

Figure 3

A UECC (United European Car Carriers) RoRo vessel approaching the Western Docks in Southampton, in May 2015. Notice also the vessel at the Marchwood military port to the left, and the cruise vessel in the background. Southampton Water can accommodate the largest vessels afloat on the seas today.



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Figure 4. Additional Information from APP (Associated British Ports) www.edudest.uk

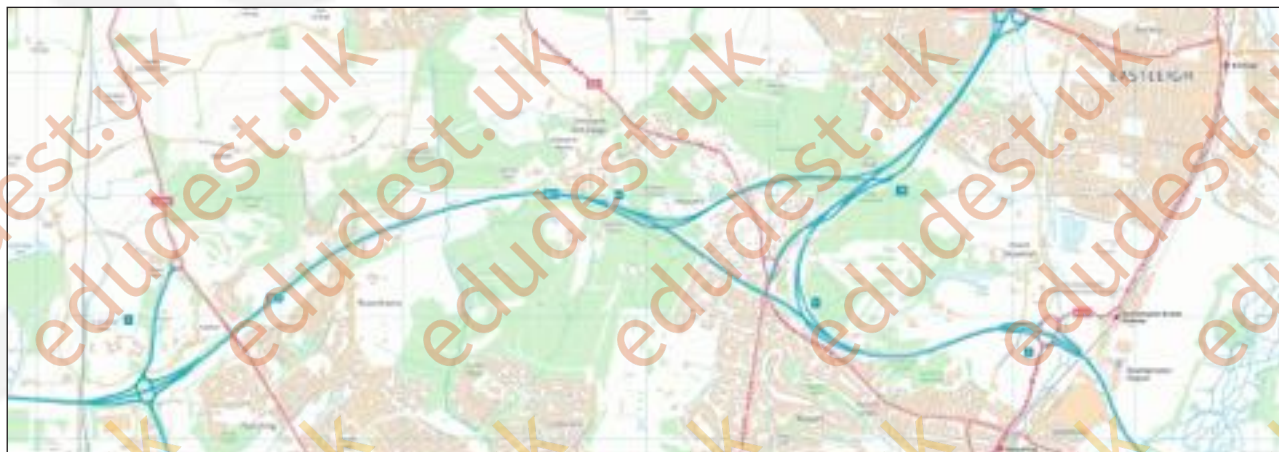
- » A major dredging programme maintains channel depth to allow access to the largest vessels afloat.
- » Less than two miles from the M27 motorway, which links to the M3 towards London.
- » Direct links to the main railway network for both freight and passengers.
- » Southampton International Airport is close by, and both London Gatwick and London Heathrow are within easy reach.
- » The port is less than 100 miles from mainland Europe and is close to international shipping lanes for global transport.
- » SCT5, a new purpose-built 500m deep-water quay, is located here to handle the largest ships in the world.

Figure 5. Calshot Spit

Calshot Spit and the Isle of Wight shelter Southampton Water from the worst of the wind-driven south-westerly waves (the UK's prevailing weather direction), making it relatively sheltered and calm waters. The port itself is located towards the top of Southampton Water so it is very sheltered.



Figure 6. Ordnance Survey map showing the site and situation of Southampton port.

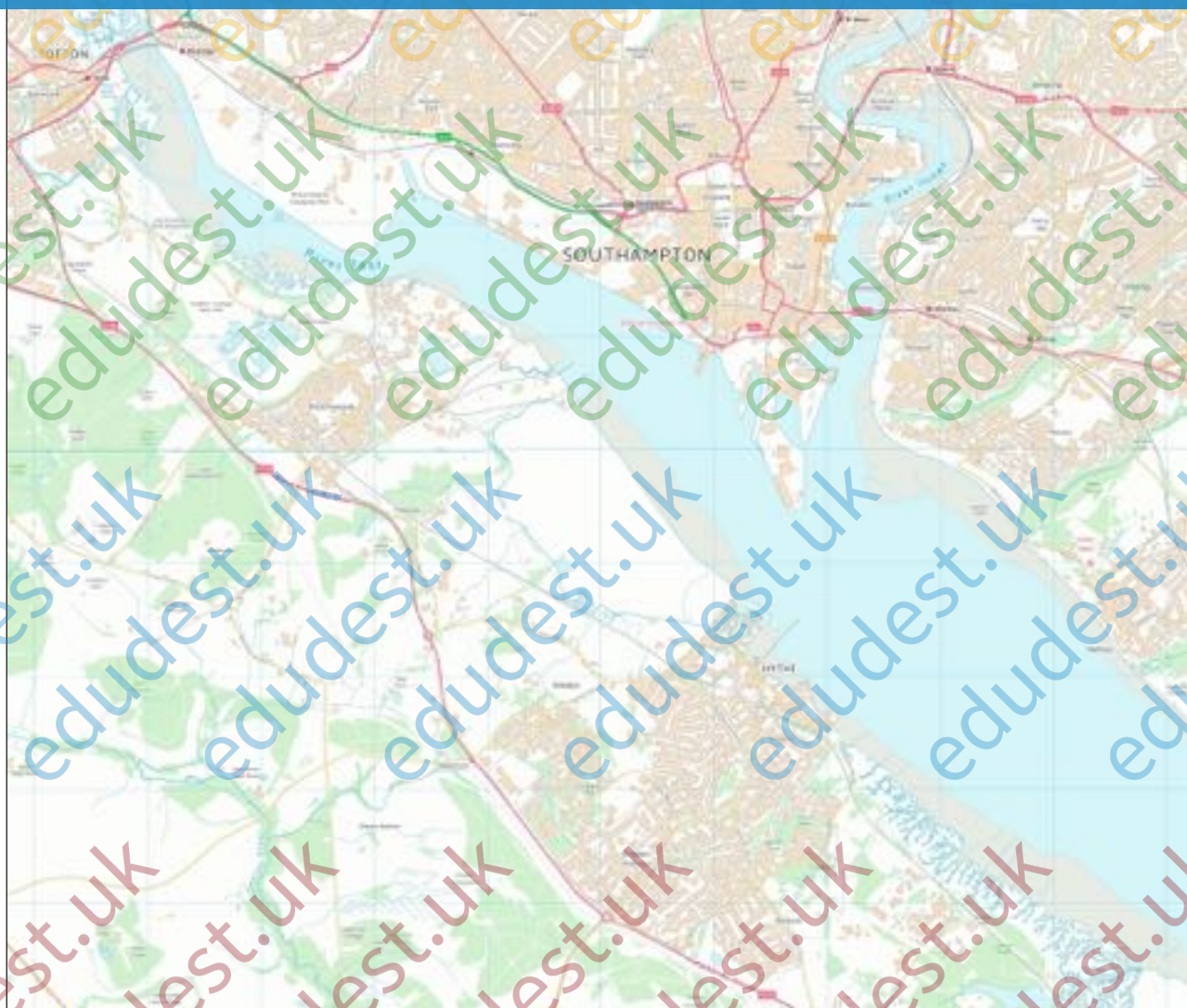


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TASK

Complete the table below with evidence from **all** of the figures on the previous pages as well as your **own observations** from the ferry.

The idea is that you show that you can interpret information from a variety of different sources to explain the **evidence** for the characteristics you have already identified in the pre-visit activity as making this a good location for a port.

There are also a couple of blank rows for you to add in your own ideas!

Characteristic making this a good location for the port	What evidence is there in the figures / your observations for this characteristic existing in this location?
Flat land for building port facilities	
Good in-land transport links for the transportation of goods	
Good links to other countries for trade	
Easy access for cruise passengers	
Labour supply close by to work in port	
Deep water for large vessels	
Wide channel to accommodate multiple vessels passing	
Shelter - not too exposed	
?	
?	

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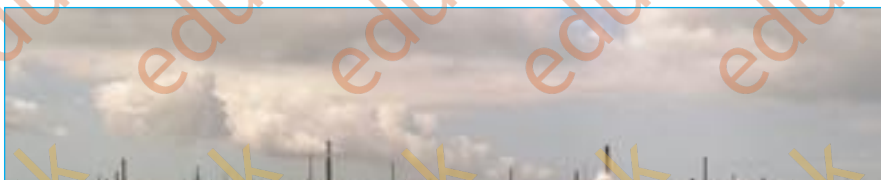
ON THE FERRY - TASK TWO

Be aware - this document is written as if you are travelling from Southampton to East Cowes. If you are completing it on the return journey you'll need to adjust the order of the tasks.

About 20 minutes into your journey you will start to pass Fawley oil refinery and power station. These are the subject of the next exercise. If you are still working on Task One, pause for a while and go back to it later.

Oil Fired Up!

With towers taller than football pitches are long, it's hard to miss Fawley oil refinery!



Fawley refinery is located along the

western shore of Southampton Water

towards the town of Fawley

where it makes the refinery

has an oil storage tank capacity

3,250 acres and handling around

330,000 barrels of oil per day. It

produces almost one fifth of the fuel used on the UK's roads - if you re-fuel your car anywhere in the south of England, chances are that it came from Fawley. In fact, the ferry you are on is almost certainly using Fawley produced fuel.

In addition, the adjacent petrochemical plant uses some of the crude oil that arrives here to make all manner of products. You are surrounded by things made from crude oil; from the tyres on your car to the trainers on your feet and the toiletries you use to wash your smelly feet after they've been in your trainers!



Crude oil arrives from all over the world, including the North Sea, Russia, the Middle East, West Africa and South American. Around 2,000 tankers arrive at the 1.5km-long marine terminal each year, where it can take 2 days for their oil to be pumped out along pipes to some of the site's 330 storage tanks.

From here the oil is processed; this involves the use of some 300,000 tonnes of sea water from Southampton

Water each day, mostly for cooling. Processed oil then leaves the site by pipelines, sea or rail. Around 80% is taken from Fawley through its network of almost 700km of pipelines, which connect to five distribution terminals at key locations around the country and also to Heathrow, Gatwick and Birmingham airports.

You will also be able to spot Fawley oil-fired power station, which was supplied by oil from the refinery and was used to generate electricity during times of high demand.

The power station closed down operations in March 2013, but it has yet to be decommissioned and demolished.



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Now it's time for you to do some work... You are going to draw a simple sketch of Fawley as you pass it on the ferry. Do this in the frame below. It doesn't have to be a work of art, but try to **outline the key features** of the site, and give a **sense of scale** in your drawing. You could **label key features** too.

Then, using the background information provided as well as your own observations, **annotate your sketch** to show characteristics which make the location of this site a good choice. **Show physical and human characteristics in different colours!**

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Post-Visit Activity: Into the Dragons' Den!

Introduction

You have learned a great deal about the physical and human characteristics that have made a good site for the settlement of Southampton to develop, and the port and oil refinery to develop along Southampton Water.

Working in small groups, it's time to put your expertise to the test in the Dragons' Den!



The Scenario

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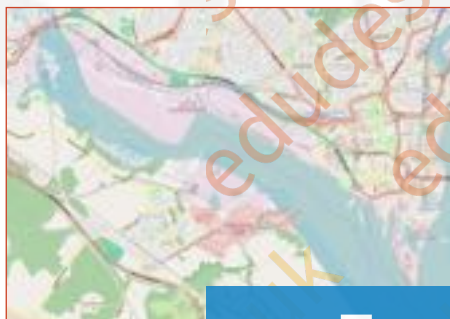
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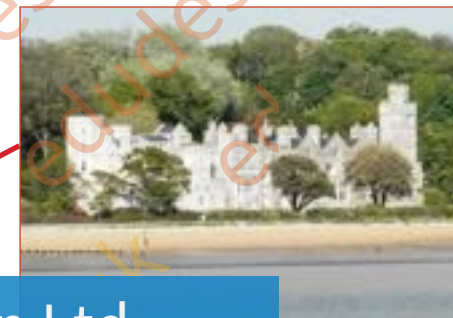
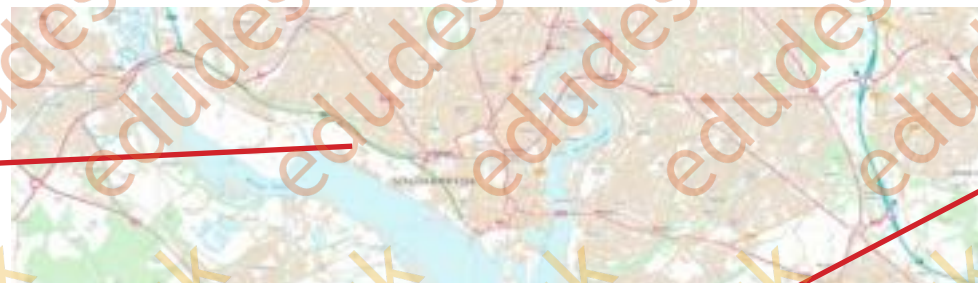
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The Task

1. Using all of the information making up this document, **and the annotated map on page 13** which has images of some of the features along Southampton Water, you must choose the most suitable site for the new docks.
2. You will put into practice all that you have learnt on this activity so far to select the most appropriate site.
3. You will present your plan to the CEO (your teacher!) and you must justify your choice of site to convince them that your 'pitch' is better than any of the others. Just like on Dragons' Den, you will be dismissed without a second glance if your pitch isn't up to scratch!
4. Start by choosing a Project Manager who will have the ultimate say in organising and delivering your pitch.
5. Good luck, and may battle commence!



Existing Port Facilities



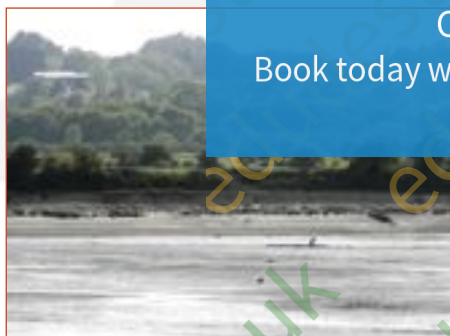
Netley Abbey

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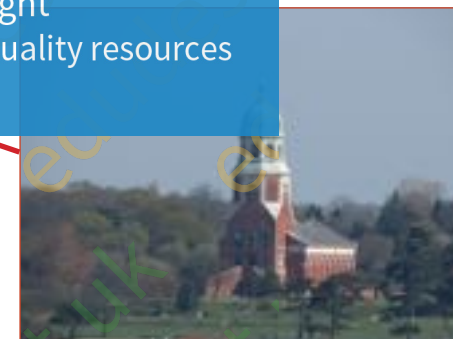
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Mudflats, Saltmarsh & Woodland,
Lamma Wood



Heritage Centre, Royal Victoria
Country Park



The now **redundant** Fawley
Power Station



Calshot Activities Centre - the Solent's premier watersports centre



Fawley Oil Refinery & Petrochemical
Plant

