



## *A Jurassic Coast Mystery: Why might you think twice about retiring to Lyme Regis in 50 years time?*

### **Background:**

This fieldwork activity for Key Stage 3 was developed for the 2007 Fossil Festival in Lyme Regis, during which school groups attended a series of workshops. The task could therefore only last one hour, and as a result the fieldwork was subdivided to focus on three sites, with groups of students working at a single site and feeding back to the rest of the group. This activity could be developed into a half or even whole day of fieldwork if the students visited all three of the sites in turn.

### **Aims:**

1. To gain an understanding of the risk that coastal erosion and land sliding pose for coastal settlements.
2. To start to think about the implication of climate change and sea level rise for these settlements and human activity.

### **Format of the activity:**

This activity focuses on three sites at the eastern end of the Lyme Regis sea front, close to the Marine Theatre and St Michael the Archangel's church. We started at the anchor (not a pub, a huge anchor!), just to the east of the seafront car park, where there is an area in which the students can congregate. We did the starter activity here, although it was a bit noisy. The route between the three sites is completely off road. The students were instructed to keep to the footpaths in all but one location (site one), where they have to walk across the grass in the graveyard to reach the viewpoint. In this area students should be supervised because there is an unguarded cliff edge (please see risk assessment for more details).

### **Starter**

To open proceedings, two students were asked to put on hats/scarves and glasses (in an OAP style disguise) and to role play a conversation between two pensioners about their options for a retirement home. Our role play was very short, it went something like this:

#### **ROLE PLAY**

**Man:** "Okay my lovely, now that we've both retired, we should think about moving to a nice place in the country."

**Woman:** "How about that nice Lyme Regis where we went on holiday last year?"

**Man:** "Now that's a very good idea. Let's take a trip to Lyme Regis and see if it's suitable."

... I am sure you could come up with something far more imaginative!

## Main activity

The main activity focuses on three sites (see map), at each of which students must solve a smaller mystery which contributes to the main question. The accompanying work booklet has sections which relate to each of the sites, and each site has photo resources for students to study while they answer the question. We displayed the photos resources as posters at each site, but they can also be printed out as handouts.

The topics of the three sites are as follows:

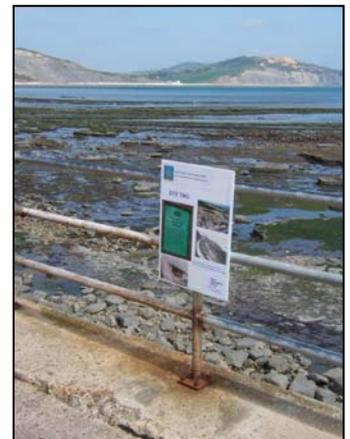
**Site 1. Housing:** *Why might you have difficulty getting a mortgage or insurance for your home in Lyme Regis in 50 years time?*

This site, in the churchyard of St Michael the Archangel's church, overlooks the Black Ven landslide and students can also see several houses perilously close to the cliff edge. Photo resources relating to the site show the fate of some Lyme Regis houses in the past and students draw an annotated sketch to show how they think this view might look in 50 years time.



**Site 2. Accessibility:** *In the 1920s, it was a 2 km drive from Lyme Regis to Charmouth, the next village along to the east. In 2007 it is a 5 km drive. Why might it be even further to Charmouth by the time you retire here?*

The second site, on the sea front at a location called Long Entry, shows the view at the bottom of the Site 1 cliffs. Here students have a view of the coast from Lyme Regis to Charmouth, where until the 1920s there was a coastal road. The photo resources include a more recent poster informing walkers that the Coast Path between the two settlements has been diverted inland, and students can deduce that coastal and slope processes are impacting on accessibility.



**Site 3. Defending the town:** *West Dorset District Council is spending a large amount of its budget protecting Lyme Regis from the sea. Why might you wish the council had spent even more by the time you retire here?*

The final site is located on the coastal defences by the Marine Theatre. These defences were completed in 1995 as Phase 1 of West Dorset District Council's three part scheme to protect the town. The defences comprise a double sea wall, rock armour, groyne, sloped paths and drainage, as well as providing a new promenade and seating.



## **Extras (Bonus questions):**

To inform the students further about the problems faced by the town of Lyme Regis, we included some 'bonus questions'. Students had to locate the site of these using the map provided, and at each site had to answer two questions. Participation was optional, but students with the best answers at the end of the session received prizes (fossils!). The photo resources, questions and student answer sheet (plus answers) are available through the relevant link.

## Feedback

Our students had an hour to visit one of the three sites and then feedback to the rest of the group. Our time was limited, so students revealed their findings in the field back in the anchor location where we started. Some fed back in role...

Ideally, students would have had more time to prepare their presentation, and could have spent time on this back in the classroom using, for example, PowerPoint or MovieMaker.



## What next?

The video clip accompanying this resource shows a violent storm crashing onto the sea front at Lyme Regis. Showing this video to the students following the trip provides a good opportunity to discuss the implications of climate change for the town of Lyme Regis - with more extreme events such as this forecast, how will the town and its residents cope? What are the implications for coastal processes such as erosion and slope processes in this unstable area? The video clip is particularly useful if the day on which the fieldtrip took place was calm - it provides a dramatic contrast. Students often find it hard to imagine the power of the sea on a beautiful still day.

## Possible follow-up work:

- A piece of written work answering the mystery and considering the future of Lyme Regis, using sketches and photos from the fieldtrip.
- A DME on the coastal defences - what is needed to protect Lyme Regis in the future?
- A poster or brochure advertising Lyme Regis to holiday makers or prospective house buyers in 50 years time. What will the town be like? What will the weather be like?
- "Coastal Manager", an ICT resource published by *Geopacks* (see link), teaches students about the factors which need to be considered when deciding on how best to defend an area of coastline from erosion and flooding.

### **Embedding this fieldwork activity:**

With the starter and follow-up activities outlined above, it is possible to complete this fieldwork as a stand alone activity. However, fieldwork that adds meaning and value to ongoing classroom based learning can be considered a more effective approach. The obvious location of the fieldwork within programmes of study would be as part of a module on coastal processes, and students may benefit from some prior learning on coastal processes and management when considering some of the questions raised. The fieldwork would also lead neatly into a unit on climate change, particularly if the video clip is used to highlight the implications of more frequent extreme weather events.

### **Adapting this activity for alternative sites:**

The nature of much of particularly the south and east coastlines of the British Isles means that an activity such as this is readily adaptable to alternative sites, especially those with a history of coastal erosion or land sliding. The historical photos and video clip for this activity were obtained from West Dorset District Council, other councils are likely to possess similar for their areas. Developing this activity for an alternative site would require a pre-visit to identify possible sites, plan the route and complete a risk assessment. The map for Lyme Regis was drawn by hand.

### **Resources:**

- Map of the three main fieldwork sites plus the location of possible bonus questions.
- Work booklet
- Photo resources (poster or handout) for each site
- Video clip
- Risk assessment

We were lucky enough to have an engineer who had worked on the coastal defences at Lyme Regis come and speak to the students about the scheme. West Dorset District Council has a small office for the coastal engineers located on The Cobb in Lyme Regis. Contact them at:

Lyme Regis Environmental Improvements Office  
The Cobb  
Lyme Regis  
Dorset  
DT7 3JJ

01297 445051

[engineers@westdorset-dc.gov.uk](mailto:engineers@westdorset-dc.gov.uk)

Even if they can't provide an engineer to speak to your group, they do at least have information about the protection works that will help inform you and your students.