#### **GEOLOGY FIELDWORK**

#### FIELDWORK TASK

#### SHAPFELL ROAD CUTTING (GR 555055)

### **Activity 1**

 Make a brief assessment of any field hazards and list the safety procedures you will now follow.

# **Activity 2**

- Sketch at least two folds and label as many features as you can.
  - measure the angle of the limbs
  - measure bed thicknesses
  - measure the angle and spacing of joints

Show the above on your sketch.

- For at least two beds use a compass-clinometer to measure and record the dip and strike.
- Name and describe in detail the characteristics of the two main rock types.
- Use an annotated sketch or sketches to compare how these two rocks have reacted to the folding.

# **Activity 3**

- For each fold record the angle of each limb and use this to name the type of fold.
- Take measurements that will allow you to calculate the amount of shortening due to compression.
- Calculate the shortening due to compression.
- At the right of the exposure are some way-up features. They are sole-marks. Draw an annotated sketch or sketches and take relevant measurements of these features.
- What does this tell you about the age relative age of the beds and the way-up of the folds?

(20)

# SHAPFELL ROAD CUTTING Markscheme

Fold sketch showing main features, antiform/synform, crest/limbs/axial plan	ne 2
1. no sketch	
2. simple sketch	
3. good sketch, most features labelled	
Sketch and labels of way-up features	2
1. no sketch	
2. sketch and labels of one feature	
3. sketch and labels of two features	
Field measurements Dips/strikes.Limbs.Joints.Way-up.Comp/incomp.	6
1. no record	
2. one dip/strike accurate/limb/joints/way-up measurement	
3. two dips/strikes accurate or	
4. three	
5. most measurements taken and recorded accurately	
6. one or two minor errors at most	
7. all measurements taken and recorded accurately	
Relative ages of rocks made clear, fold types clarified	2
Accurate rock descriptions; Greywacke	2 2
Shale	2
1. no description	
2. brief description / not named	
3. good description and correctly named. (Allow sandstone for greywac	ke)
Comparison of competent and incompetent beds	2
1. no sketch/comparison	
2. sketch with either competent or incompetent reaction	
3. sketch with reaction of both	
Relevant measurements taken for shortening	1
Accurate value for shortening	1