**Investigating Coastal Landscapes:**

***To what extent has management affected coastal processes at Dinas Dinlle?***

**Methodology:**

This is a half-day exercise and requires a comparison of the beach characteristics where there is management with an area of no management. Independent measurement of longshore drift will be needed as well as evidence of what beach management has been put in place:

1. **Longshore drift direction (and speed?)**

*Rationale:* An independent measurement of this is required to avoid a circular argument (i.e. basing your proposition on a premise which is supported by the proposition).

*Data types:* This will be quantitative and, in its simplest form, will be measurements of the direction. This *could* be qualitative (but see issue above). Speed may be useful, but would require more complex measurements…probably something to consider for your own independent investigation if you choose something like this.

*Equipment:* A float (or, better still, something that can be moved by the swash/backwash, but doesn’t float – think also about ethical issues…). Speed measurements would require this plus stopwatch and markers to indicate distance over which to time the float. Camera/notebook.

1. **Beach characteristics (stone size & roundness; beach width & gradient)**

*Rationale:* This will provide evidence of what the beach is like where there is management and where there is no management (so a more ‘natural’ beach). This should enable comparisons to be made and so conclusions to be drawn about the impacts of management on the natural processes affecting the characteristics of beaches in this place.

*Data types:* This will largely be quantitative but should also include some qualitative data to support your measurements.

*Equipment:* Sampling is important here so a quadrat is needed – systematic sampling is also required as you’re investigating gradual change and so need a technique that will allow you to assess this over some distance. How much data and how it will be selected both need careful consideration to provide sufficient reliable evidence for you to draw firm conclusions (but a similar method to the Glaciated Landscapes exercises would be adequate). How to ensure gradient and beach width measurements are accurate and reliable needs careful consideration (e.g. repeat readings, orientation of measurements, where gradients are measured…). Stone roundness chart (Cailleux), callipers for long axis, measuring jug. Gun clinometer, 20m tape. Camera/notebook.

1. **Beach management**

*Rationale:* This will providence evidence of techniques used to protect sections of the coast.

*Data types:* This will be qualitative, photographic evidence that can be annotated later.

*Equipment:* Camera/notebook.

A basemap will also be needed to locate sample sites, longshore drift direction and where beach management is in place.