**Coasts Review Notes – Hard and soft engineering (traditional management)**

**What are the aims of coastal management?**

**Explain the differences between hard and soft engineering approaches.**

**Hard engineering**

* **Groynes**
* **Sea walls**
* **Gabions**
* **Revetments**
* **Rip raps (rock armour)**
* **Cliff fixing**
* **Offshore breakwaters**
* **Tidal barrages**

**What are the main advantages and disadvantages of hard engineering approaches?**

**What impacts do hard engineering methods have on physical systems and processes? (e.g. inputs, processes such as erosion and longshore drift and outputs)**

**For each – explain how they work and their advantages and disadvantages.**

**Where possible give a location where they have been used.**

**Case study of soft engineering**

**Essex Saltmarshes**

**What are the issues? Coastal Squeeze?**

**What have they done to manage the area? How successful is it? Managed realignment? Polders?**

**Case study of hard engineering**

**The Holderness Coast**

**What defences have they used along the coast? (This is dealt with in more detail in your Holderness case study)**

**What is cost benefit analysis and why is it used?**

**What is meant by tangible and intangible costs and benefits?**

**Who are the different stakeholders along the coast and why might they be in conflict?**

**For each – explain how they work and their advantages and disadvantages.**

**Where possible give a location where they have been used**

**Soft engineering**

* **Beach nourishment**
* **Cliff regrading and drainage**
* **Dune stabilisation**
* **Marsh creation**