Physical Fieldwork

Geographical Enquiry:

To evaluate the success of coastal management strategies in Walton on the Naze

Hypothesis: Coastal management at Walton on the Naze is effective at reducing erosion

Sub Hypothesis 1: The beach profile will be steeper in the managed zone than the unmanaged zone

Sub-Hypothesis 2: Infiltration rates will be greater in the managed zone than the unmanaged zone

Location: Where did you go and why?

WotN is a suitable location to study coastal management because:
- There are many different types of coastal management in use here
- We can find out how effective coastal management is by comparing the managed zone to the south, where coastal management is in use, to the unmanaged zone in the north, which has been left unprotected.
- Easily accessible from London

EQ) Explain the advantage(s) of the location(s) used for your fieldwork enquiry (2 marks)

Method: What data collection techniques did you use?

Describe what you did and explain how they help to answer your question.

Description-filtration rates were measured in the managed and unmanaged zones at 6m intervals (systematic sampling) along the five 20m-long transects that were set up using the tape measure. At each of these points, the mallet was used to secure the infiltration tube into the ground (2cm deep). Then, water from the sea was collected in a bucket and poured to the brim of the infiltration tube. A ruler was used to measure the amount of water that had emptied from the tube after one minute, as measured by a stopwatch.

Justification- Infiltration rates tell us how built-up the beach is and therefore if the groynes are working (preventing longshore drift)

- Infiltration rates were measured less frequently (every 6m) than the beach profile because of time constraints.

EQ) Justify one primary data collection method used in your human geography enquiry (3 marks)

Risks-.Describe the risks you experienced on your fieldwork trip and how these could be reduced

1 – Tides - consult tide timetables, particularly along cliff sections, headlands and wide beaches. Every year people get cut off in this way.
2 – Watch out for and avoid slippery rocks on the foreshore at low tide. Students advised to wear sensible footwear and warned of the risks.
3 – Weather - hot weather. Students advised to bring plenty of water and sun cream if the weather forecast is hot.

EQ) Suggest one reason why risk assessment was important when planning your enquiry. (2 marks)

Analysis and conclusion

Description of results: At all locations along the transect, managed zone infiltration rates are significantly higher than in the unmanaged zone. For example, at a distance of 18m from the sea, managed zone infiltration rates are 240mm per minute while unmanaged zone infiltration rates are just 5mm per minute.

Analysis of results: We can infer from the large difference in infiltration rates that coastal management is effective at Walton on the Naze. This is because infiltration rates are higher in areas where sediment is more built up on a beach. Water passes through the gaps between sediment particles more quickly in built-up areas. Therefore, the high infiltration rates in the managed zone tell us that the beach contains more sediment than the unmanaged zone, and as a result we can infer that coastal management has been effective at maintaining sediment on the beach in this area.

Data anomaly: In the unmanaged zone, infiltration rates decreased with distance from the sea at the last point along the transect. This is an anomaly because the rest of the data shows increasing infiltration rates with increasing distance from the sea. This might have happened because of human error (e.g. the infiltration tube was not driven deeply enough into the sediment so water spilled out at the bottom).

EQ) For one of your fieldwork enquiries, to what extent did the result(s) and the conclusion(s) meet the original aim(s)? (9 marks + 3 SPaG)
EQ) To what extent were the data collected useful in satisfying the original aim(s) of the enquiry? (6 marks)

Evaluation of data presentation:

Method: Grouped bar chart *(See below)*

Strengths:	**Weaknesses:**
• *Very visual. Easy to plot by hand.* • *Full range of data can be seen together with the patterns and groupings of the data.* • *Good for comparing sets of data.* • *Appropriate for discrete data.*	• Significant differences are hard to compare.

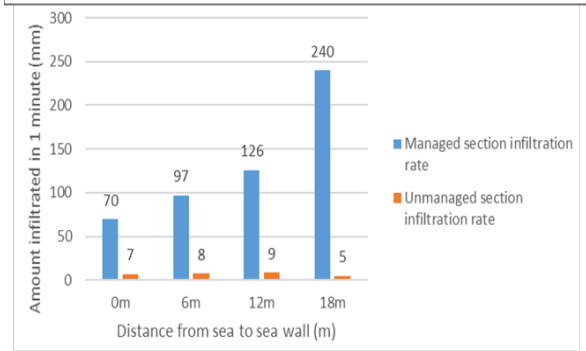
How could the graph/ presentation be improved
GIS - Proportional symbols could have been used to show changes in sediment size along the shore. These could be located on a digital map

EQ) Assess how effective your presentation technique(s) were in collected in this enquiry. (6 marks)

Evaluation of data collection:

Strengths	**Weaknesses**	**Next time/ improvements**
• *The method of data collection is simple to carry out.* • *Systematic sampling is simple and has good coverage of the study area..* • *little equipment needed.* • *Equipment used to ensure accuracy*	• a larger sample would have given more accurate data. • There may be some user error when water spilled out of the tube • Tape measures need to be held parallel to the beach which was difficult	• *Measure more intervals on each transect* • *Compare different times of the year.*

Comparative Bar Chart Showing Infiltration Rates in Managed and Unmanaged Zones



Conclusion: What was the answer!?

The results of this investigation support the hypothesis that coastal management at Walton on the Naze is effective at reducing erosion. Both of the main methods of primary data collection – beach profiles and infiltration rates – provide evidence that the beach in the managed zone is significantly more built-up with sediment than the beach in the unmanaged zone. This is because the managed zone has a number of coastal management methods in place, including groynes, sea walls, and rip-rap, whereas the unmanaged zone has been left alone. The fact that the beach is more built-up in the managed zone shows that coastal management is effective because the management methods have retained sediment on the beach, instead of it being eroded away or transported by longshore drift. The unmanaged zone has a smaller beach with less sediment because there are no methods in place of preventing erosion.

Human Fieldwork

Geographical Enquiry:

To evaluate the success of regeneration of the Docklands

Hypothesis: Regeneration has not benefited Canary Wharf and Cubitt Town equally

Sub Hypothesis 1: The environmental improvements haven't benefited local residents in Cubitt Town.

Sub-Hypothesis 2: The economic opportunities haven't benefited Cubitt Town as much as Canary Wharf

Location: Where did you go and why?

The docklands was a good location to look at urban regeneration because:

- Recent regeneration so can conclude any difference are due to regeneration.
- Cubitt Town has quite a high deprivation index score so its an important area of the docklands to see how it has been affected by the redevelopment.
- Easily accessible from school

EQ) Explain the advantage(s) of the location(s) used for your fieldwork enquiry (2 marks)

Method: What data collection techniques did you use?

Describe what you did and explain how they help to answer your question.
Social and Environmental Quality survey
Description-1We used a survey form which took into account aspects of the environment and social quality of life in each area. We went towards the centre of our study sites in Canary wharf and Cubitt Town to complete the survey. When completing the survey we looked around us and gave a score to each of the environmental and social factors on the survey form.
Justification- This enabled us to quantify the quality of the environment in each location and the social aspects of each for example 'crime' or 'services'.

EQ) Justify one primary data collection method used in your human geography enquiry (3 marks)

Risks-.Describe the risks you experienced on your fieldwork trip and how these could be reduced

1 – Transport- staying in groups so we don't get separated.
2– Weather - hot weather. Students advised to bring plenty of water and sun cream if the weather forecast is hot.

EQ) Suggest one reason why risk assessment was important when planning your enquiry. (2 marks)

Analysis and conclusion

Description of results: For each area of the SEQS, Canary Wharf had a better score than Cubitt Town apart from traffic. For example the category of buldings had a score of 2.8 in Canary Wharf and 0.2 in Cubitt Town, a difference of 2.6.
Analysis of results:

EQ) For one of your fieldwork enquiries, to what extent did the result(s) and the conclusion(s) meet the original aim(s)? (9 marks + 3 SPaG)
EQ) To what extent were the data collected useful in satisfying the original aim(s) of the enquiry? (6 marks)

Evaluation of data presentation:

Method: Grouped bar chart *(See below)*

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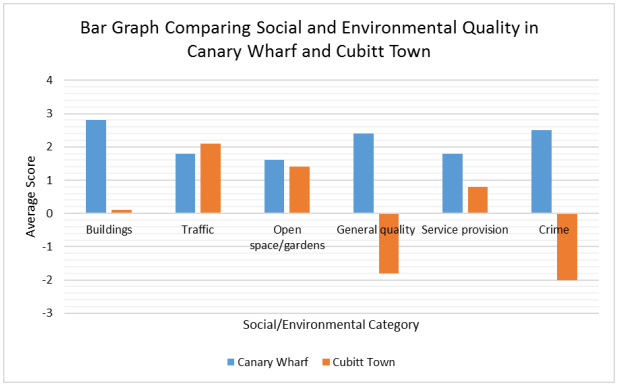
• *Very visual. Easy to plot by hand.* • *Full range of data can be seen together with the patterns and groupings of the data.* • *Good for comparing sets of data.* • *Appropriate for discrete data.*	• Significant differences are hard to compare.

How could the graph/ presentation be improved
Separate further into different categories

EQ) Assess how effective your presentation technique(s) were in collected in this enquiry. (6 marks)

Evaluation of data collection:

Strengths	**Weaknesses**	**Next time/ improvements**
• *The method of data collection is simple to carry out.* • *Systematic sampling is simple and has good coverage of the study area..* • *little equipment needed.* • *Equipment used to ensure accuracy*	• a larger sample would have given more accurate data. • There may be some user error when water spilled out of the tube • Tape measures need to be held parallel to the beach which was difficult	• *Measure more intervals on each transect* • *Compare different times of the year.*



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