

COASTAL DEFENCES

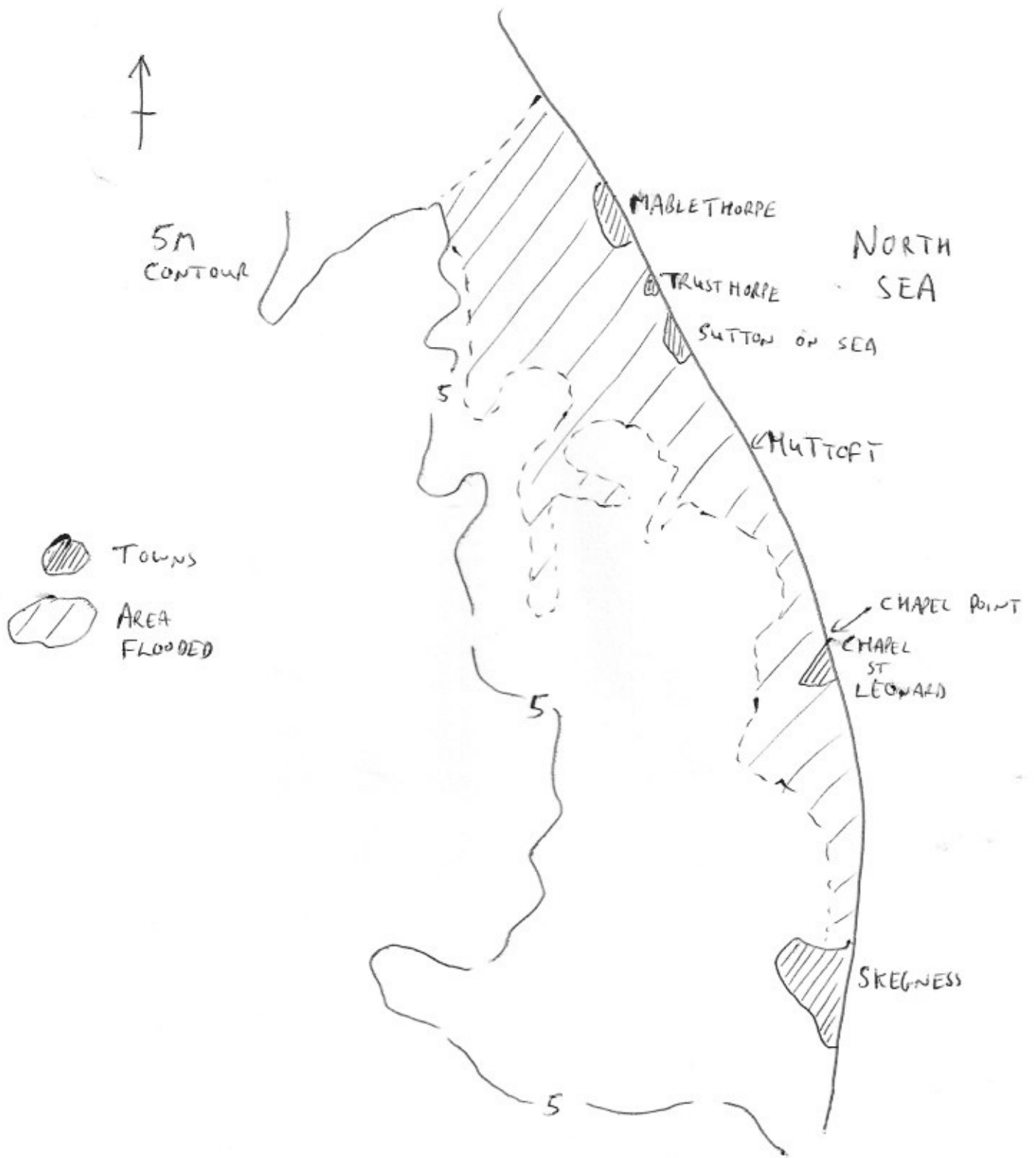
FROM

SKEGNESS

TO

MABLETHORPE

FLOODED AREA-1953-



COASTAL DEFENCES

The coastal defences will be studied at three places along the 24 km of coastline from Skegness to Mablethorpe. Nearly £100 million pounds has been spent over the last few years in an attempt to prevent a recurrence of the events of 1953.

BEACH NOURISHMENT

Along the whole length of the coastline sand is being added to the beach in an attempt to build up the beach to the + 4.5 m level. Most of the sand which is used is being dredged from sand banks in the north sea.

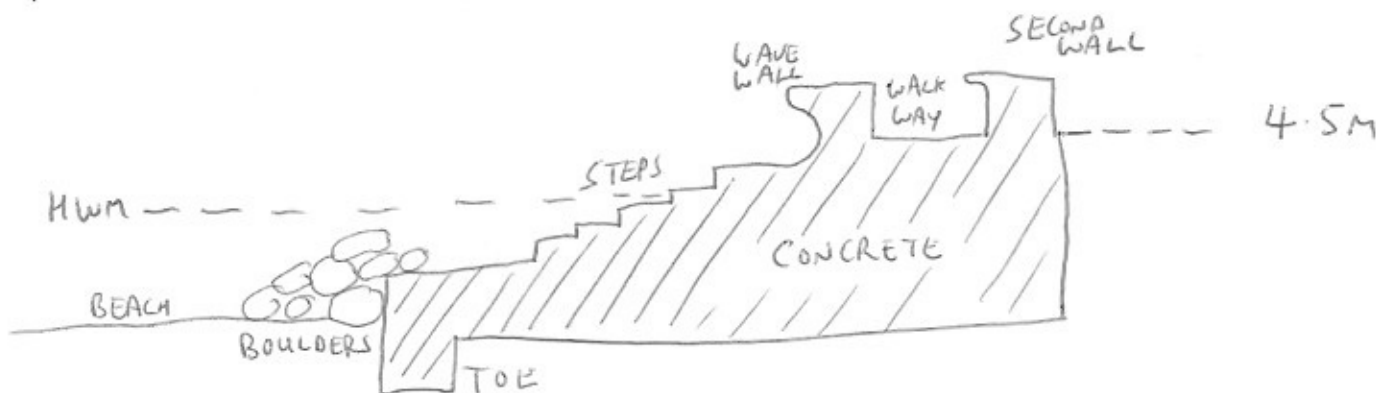
If a beach can be built up this will lessen the effects of waves as wave energy will be absorbed as waves cross the beach. It may be difficult, however, to keep the sand on the beach, and groyne are no longer seen as a viable long term proposal on their own.

1. CHAPEL POINT

Three defence methods are in evidence.

- Groynes, the cheapest answer but not one which lasts a long time.
- Tarred boulders using cheap slag from the steelworks to reinforce the dunes.
- The new stepped concrete defence costing over £3000 per metre.

Annotate the diagram below



2 HUTTOFT CAR TERRACE

The shoreline is very low here with very little beach material making it very susceptible to coastal floods.

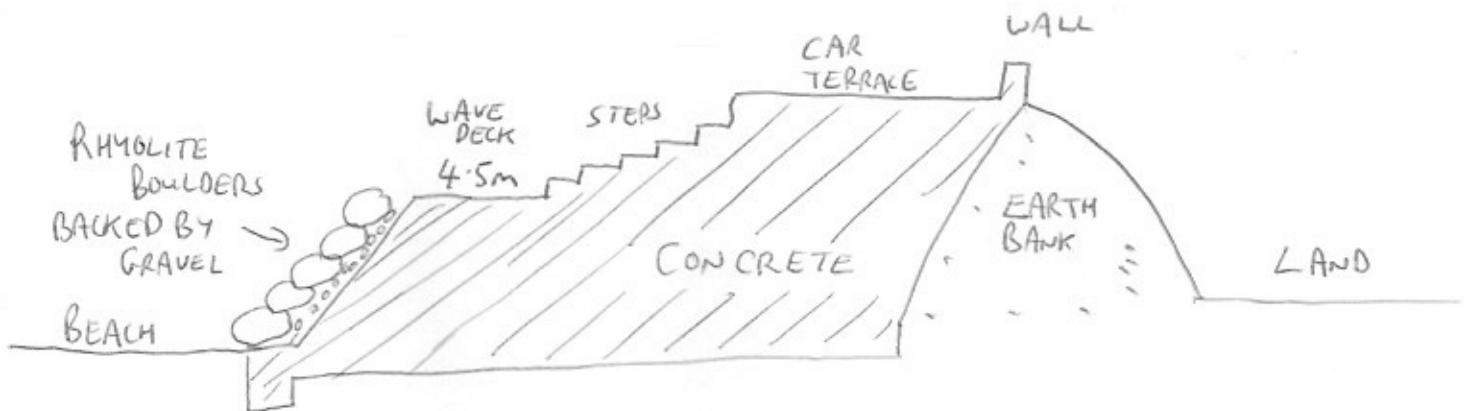
The clay shore along little infiltration of waves causing waves with a strong swash. The lack of a beach makes the water very deep at high tide producing more erosive waves.

Two techniques are used

- a. In the northern section a rock armour structure is used. This comprises of
 - i. rock armouring
 - ii steps
 - iii sea wall

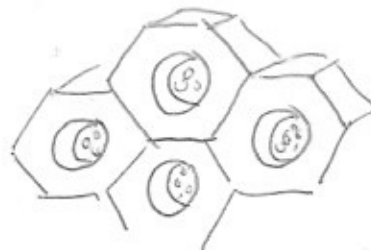
The boulders absorb wave energy allowing water to percolate slowly through the underlying gravel causing less turbulence and less erosion

Annotate the diagram below



- b. CEEBEEES are used in the southern section as a SSSI prevented the use of large boulders. These large hexagonal cellular blocks are placed above gravel to reflect and absorb wave energy. They are less effective than rock armour since they create more turbulence at high tide.

Annotate the diagram below



3 SUTTON ON SEA

The Sutton council would not allow the use of boulders or ceebees since they would make the tourist beach dangerous and inaccessible. Here the scheme has built a promenade with a system of voided steps to absorb wave energy and water allowing very little reflecting. The cost, however, was over £7000 per metre.

Annotate the diagram below

