

## CASE STUDY FROM KENT

### KINGSDOWN'S BATTLE WITH THE SEA



1905

The old village of Kingsdown, between Dover and Deal, has experienced greatly increased erosion of its beach and loss of beach shingle.



1950



2004

Examine the three photographs, which were all taken from more or less the same point looking north towards the southern edge of the village, which can be seen in the far distance:



a) What do you notice immediately about the extent of the beach in 1905?

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b) At least three uses of the beach are shown on the photo. What are they? Hint: soldiers slept in the tents.)

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The reason such a huge expanse of shingle built up at Kingsdown is uncertain, but by 1898 the shingle formed a flat-topped strip of land 275 metres wide. Much of it lay beyond the reach of the waves, and so houses were built on it.

c) Explain the shape of the cliff profile in 1905.

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d) How have the beach and its uses changed since 1905?

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**e)** Erosion of the beach had already set in by 1898 and has accelerated since, for reasons that continue to be debated. The building of the breakwaters at Dover Harbour (in particular the Admiralty Pier begun in 1858 and still incomplete in 1900) is thought by many to be the main cause of the erosion. Why do you think the harbour breakwaters have been blamed? Can you suggest another possible cause?

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**f)** In the early 1950s the sea was encroaching on Kingsdown Beach by about 2 metres a year. By 1962 the rate had doubled. To try to counteract the erosion, extra shingle has been brought in by boat and placed on the beach. From the 2004 photo, describe what else has been done:

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**g)** What has happened to the cliff since 1905, and what may happen to it in the future?

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