

KS3/GCSE Geography. The Big Issues

Coastal erosion: the high cost of protecting homes

Josh: Hi. I'm Josh. I'm 14 and I live in north Norfolk. I think coastal erosion is an issue that everyone living in this region can relate to.

The high cliffs on the north Norfolk coastline are soft and vulnerable because of storm surges and rising sea levels. This wears away at the rock causing coastal erosion.

The village of Happisburgh perched on the edge of the sea is one of the worse effected communities in the country. Sea defences can be built, wooden groins, solid sea walls, but they're expensive and they erode over time and need rebuilding.

Unfortunately, the Happisburgh's case and many other villages in this area and in the country the actual cost of defending it was a lot more than the value of the houses.

News clip: Piece by piece the house came down.

Josh: In Happisburgh in 2012 the North Norfolk District Council decided to demolish the houses most at risk rather than pay for defences. It's a policy still in place today. But is it as unfair as it seems, I don't know.

I want go visit some places, go and meet some people and hear both sides of the argument and then I can make my mind up.

Coastal erosion. Is coastal erosion worth preventing?

Brian is from North Norfolk District Council. So I'm going to take him up on his offer and find out why they're not protecting all of the coastline. But first I want to see what's left of the sea defences.

I'm guessing they were put in place after the 2013 storm surges. The groins they look quite old these ones. And that over there, they look like the remains of what was a house. It's just fallen in to the sea.

- Josh: Hi. I'm Josh.
- Brian: Hi. Morning Josh. I'm Brian, pleased to meet you.
- Josh: So why does erosion happen more here?
- Brian: You've got to remember these are soft cliffs, sands, gravels, silt and glaze. They're easily erodible. They easily wash away and there is no protection.
- Historically I think the erosion rate here would be between a metre and a metre and a half. In the worse condition we saw up here a few years ago I think we recorded 13 metres in one month.
- Josh: 13 metres in a month.
- Brian: In a month. And that was massive.
- Josh: So what is the council doing about it?
- Brian: We've got a policy in place. The policy is what's called the 'Shoreline Management Plan'. You could if you had the money, you could defend this coastline, everywhere you wanted to, but it would cost an absolute fortune. And you'd be constantly spending everything you've got doing it. There's no cheap answer. There's no simple solution.
- Josh: So how much does it cost then?
- Brian: A traditional defence would have been a series of groins, the remains of what you see up there.
- Josh: A groin is a wooden barrier built out in to the sea to prevent movement of sand and beach material.
- Brian: Typically a groin would cost at today's prices, let's say £1,500 for every metre. A lot of money. A cheap sea wall - £3,000 a linear metre. So that's three, six, nine, twelve, 15, 18, 21.
- Josh: I've just spoken to Brian and yeah, it was really interesting to hear what he had to say but there's not a lot we can do because it's all down to money now.
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- Josh: Now I'm going to meet Jamie, a farmer whose land is affected by erosion. His farm is in Trimingham, ten miles up the coast from Happisburgh.
- Jamie: Morning.
- Josh: Morning.
- Jamie: So Josh let me just show you how close we are to the coast, alright. I hope you're not scared of heights. The tide's going out as you can see and a fairly dramatic coastline we have here. You can see the top soil we're working on and the clay strata further down in the cliff line.
- Josh: So how have you been affected by coastal erosion then?
- Jamie: Well it's been an ongoing process over a number of years. And the field we're looking at now behind was 75 acres, we're now down to 52 acres.
- Josh: So you've lost quite a lot then.
- Jamie: It's very dramatic, it's very dramatic.
- Josh: But do you think we're doing enough?
- Jamie: Unfortunately we haven't got enough houses in this part of the world to justify the cost of putting the infrastructure in place to prevent soil erosion. We hope in the future there could be funds for at least an order to protect this coastline.
- Josh: Next stop, I'm visiting a Happisburgh resident, Malcolm.
- Malcolm: Hi Josh. I'm Malcolm. It's good to meet you.
- Josh: He's been living in Happisburgh for 19 years and he thinks we need to do more to protect the people.
- Malcolm: From that point there the defences stretch north, still do, about 13.5 kilometres.
- Josh: Yeah.

Malcolm: And from the other end of the bay here there are 14 kilometres of solid concrete sea wall all the way down to Winterton. So this gap at Happisburgh is the only gap and it's the weak point.

Josh: Yeah.

Malcolm: If you allow this to continue to erode you end up with people that are going to lose their homes. So it eventually transfers from a coastal erosion problem into being a very, very human problem.

Josh: In 2011 Malcolm campaigned with the North Norfolk District Council to ensure home owners receive enough money from the government before their houses were demolished.

Malcolm: And it was the first time in British coastal history that any at risk property had ever been purchased.

Josh: My opinion has changed since the start of this. Originally I thought that we should keep on defending the houses and put money into defending but it's not natural.

And the difficulty with sea defences aside from the cost is that they just move the erosion problem further down the coast to other vulnerable areas.

We should just let the sea do what it does and then give the people who are being affected by it some compensation because these are whole communities that are being troubled by this problem. And they are having their whole lives effected and it's not fair. And I think, yeah, they should get something back - before they lose everything.