

Sell a field to



10 DOWNING STREET

Mr Addison

For you to be aware

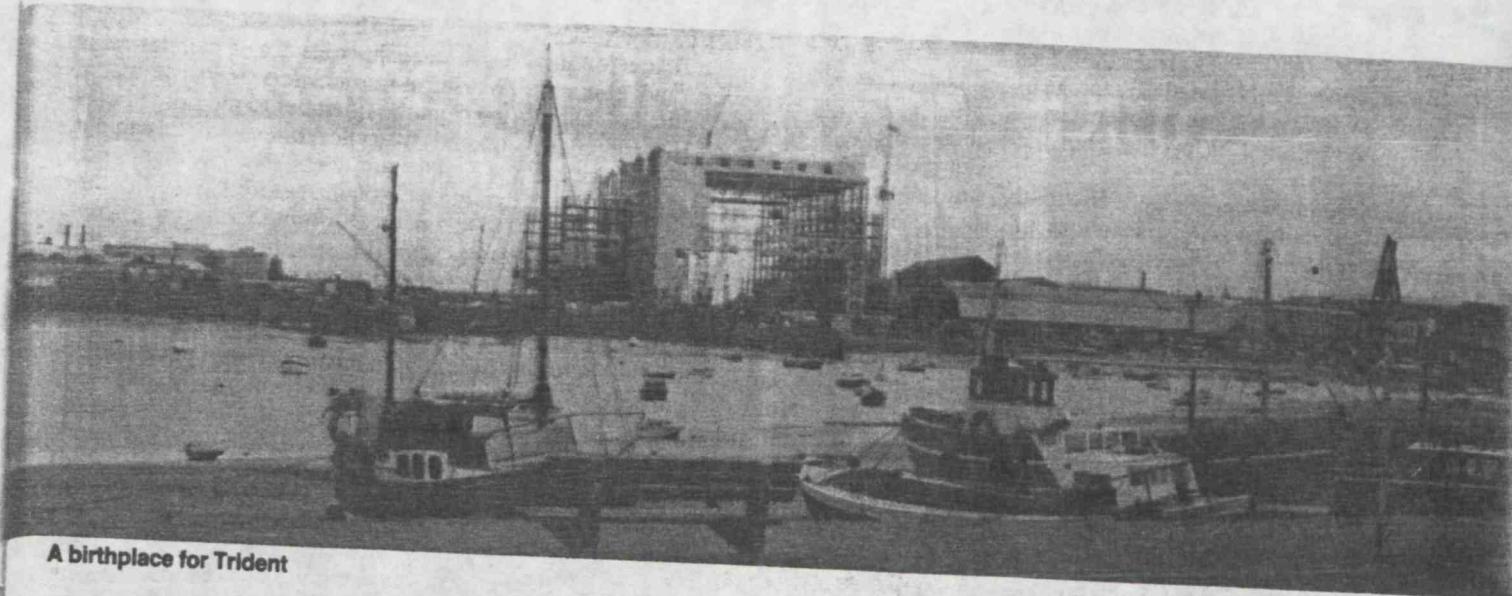
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# BRITAIN



A birthplace for Trident

## A Barrowload of radioactivity

British Shipbuilders has dredged up 3m tonnes of sand and silt from the Irish Sea contaminated with radioactive waste and dumped some of it around the town of Barrow-in-Furness, Cumbria. The seabed muck has been contaminated with emissions from Sellafield (née Windscale), Britain's nuclear reprocessing plant situated 50 miles farther north. The sand and silt, which have been used in the building of a new workshop for the Trident submarine, contain ruthenium, caesium, americium and, of course, the dreaded plutonium. The government-owned British Shipbuilders says that the risks to the local population are slight. *The Economist* has evidence that British Shipbuilders is wrong. Some Barrovians could be exposed to plutonium levels that are twice the safety limits laid down by British Nuclear Fuels, which runs Sellafield.

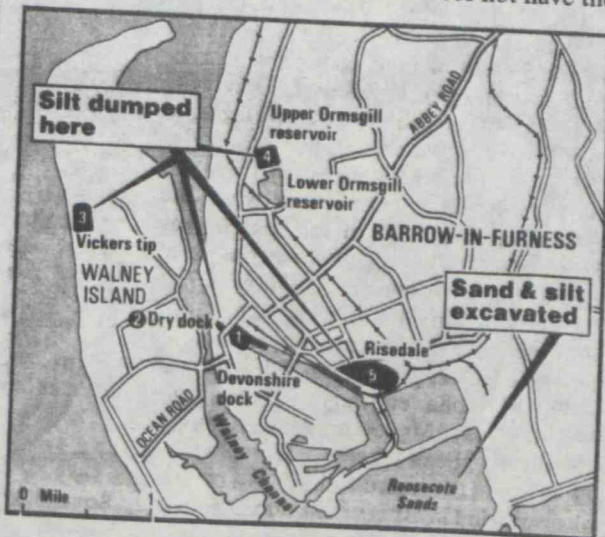
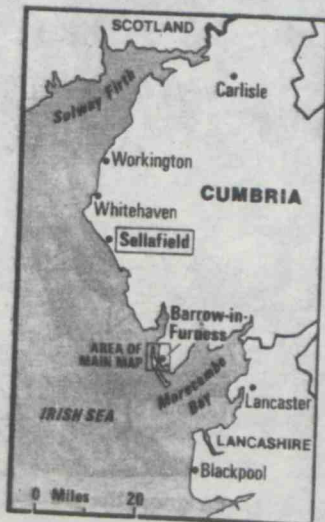
British Shipbuilders' Barrow works was part of the publicly-quoted Vickers group before the yard was nationalised in 1977 and is still known as Vickers Shipbuilding and Engineering. The yard, which is on the government's short-list for (re-)privatisation, employs a quarter of the town's workforce. It has specialised in building nuclear-powered hunter/killer submarines since the first one, *HMS Dreadnought*, was launched in 1959. It built two of Britain's four Polaris submarines and will also construct four Trident submarines.

To handle Trident and other work on its books, the Barrow yard is building a £230m workshop, 115 feet high and covering 15,000 square metres. The workshop, resembling an oversize aircraft hangar, is being built on part of the yard's Devonshire dock. Before construction work could begin, the dock had to be filled in. The cheapest and quickest method was adopted: a mixture of seawater, sand and silt was sucked from the polluted shores around Barrow. As the seabed material was pumped in, the sand sank to the bottom of Devonshire dock (1 on the map), the surface silt was skimmed off and dumped nearby in an old dry, or

graving, dock (2 on the map).

Although the Cumbrian coast and the Irish Sea are reckoned to be the worst radiation-polluted stretches of water anywhere in the world, the Barrow yard did not monitor the radioactivity of the sand and silt until the dock was nearly full—and then only at the insistence of the health and safety committee of the yard's trade unions. Even then, it simply ran a geiger-counter over the Devonshire dock area, which contained mainly sand, and proclaimed it safe. The trade unions in the yard were not convinced—and with good reason. When radioactive sand and silt are separated, the sediment is more radioactive than the sand, because radioactive particles cling to the surface of the contaminated material and, pound for pound, silt has a bigger surface area than sand. More surface area equals more radioactivity.

Curiously, for a yard that builds nuclear submarines, Barrow does not have the



OVER

## BRITAIN

facilities for testing for environmental pollution from alpha radiation, only beta and gamma. The unions insisted that an independent and thorough test of the sand and silt should be carried out. The yard called in the National Radiological Protection Board (NRPB), a government-funded body staffed by people from the nuclear industry.

British Shipbuilders seemed sure that the NRPB would give it a clean bill of health. Even before the NRPB had reported its findings, British Shipbuilders had allowed the local council to remove some of the silt from the dry dock and use it as infill on various sites, including a disused reservoir alongside another used for recreation (4 on the map); and on a British Rail asbestos tip close to a residential area (5), where a geiger-counter test by *The Economist* revealed levels of radiation up to ten times background.

Some of the silt was trucked to British Shipbuilders' own rubbish dump on Walney Island (3 on the map), a licensed tip for "low-level" radioactive waste. The tip is yards from a popular sandy beach and a stone's throw from a residential caravan site. It is unfenced, with no warning signs that it is a radioactive dump. Silt was being removed to these sites before the NRPB was called in and also during the nine to ten weeks which the board took to report to the Barrow yard. Excess sand went to a building materials supplier.

The NRPB report gave British Shipbuilders a clean bill of health. "In both an absolute and a relative sense," it said, "the doses and the risks from the use of Walney Channel material are quite low and are surely not a cause for anxiety." But there remain some questions:

- Why did British Shipbuilders fail to monitor the potentially-contaminated sand and sediments until the dock was almost full? Even were it ultimately proved that there was no risk, such action, according to Mr Philip Day, a chemistry lecturer of Manchester University who is an authority on pollution from Windscale, is "foolish, irresponsible". Mr Richard Scott of the department of molecular biology at Edinburgh University thinks it "deplorable" that the material was ever brought ashore.
- Why did the NRPB take only two samples of silt from the dry dock when the two differed in level of radioactivity by large amounts? There was a variation of five-to-one in respect of caesium 137, a beta emitter, and of more than ten-to-one in respect of the transuranic elements (ie, americium-241, plutonium-238, -239 and -240, all alpha emitters). Many more samples, say Mr Scott and Mr Day, should have been taken.
- Why did the board assume that material suspended in air is of the same radioac-

tive composition as material in bulk? When sediment is extracted from sand as contaminated as the NRPB found in Barrow, its radioactivity can be vastly increased: by up to 50 times or more. That means, says Mr Scott, the figure for silt blowing off the dry dock (and also off those areas where the silt has been dumped) "would be twice the public air limit for alpha-particle emitters specified by British Nuclear Fuels in their environmental monitoring reports."

Before panicking, let south-west Cumbrians recall that the stuff is ten times less lethal than the risk of being killed on the road or at work. But it is still toxic and dangerous. The safety and the public relations of all things nuclear need to be handled with extra special care. The risk is certainly not as small as both British Shipbuilders and the NRPB would have had Barrovians believe.

## Public spending Star-struck

The cabinet's annual blood-on-the-carpet season opened on Tuesday with the first meeting of Star Chamber under its chairman, Lord Whitelaw. Its task is to prune spending bids from departments to the 1986-87 planning total of £139 billion agreed by the cabinet in July, to make room for tax cuts in next year's budget.

Already it is clear that more spending programmes than ever before are likely to come before the Chamber, in part because a new Treasury chief secretary took over only last month. The formal public spending round is far behind schedule.

The mere existence of the Chamber, now in its fourth incarnation, is beginning seriously to undermine the Treasury's authority. Any minister who wants to walk tall among his colleagues and officials must show his Star Chamber scars. Worse, more ministers may risk appealing from the Chamber to the prime minister and chancellor, or even to the cabinet.

Last year, four out of eight programmes brought before Lord Whitelaw went on to Downing Street on appeal. This year, he has been growling that anyone who appeals over his head will be no friend of his. His team includes the "dries", Mr Leon Brittan and Mr John Biffen, both former Treasury chief secretaries, augmented by the party chairman, Mr Norman Tebbit, and the Welsh secretary, Mr Nicholas Edwards. This year's Chamber secretariat is headed by a seconded Treasury official, Mr Brian Unwin, much admired by the prime minister.

The Treasury is entering the Chamber more cheerfully than last year. Within the £139 billion planning total is an unprecedentedly high £6 billion reserve for contingencies. The "hard core" of excess bids is roughly £4 billion above target. Less than the contingency reserve—but the Treasury is determined to protect that as long as it can. There will be lots of argument about this year's likely inflation, the baseline for next year's spending, but the Treasury expects lower rates in future years.

All the big programmes will face Star Chamber scrutiny—social security, defence, energy and environment—as well as the Foreign Office, law and order and agriculture. The sensitive arts budget has been much fought over with the Treasury,



Some of Willie's friends ignore the growls