

DISASTERS IN CUMBRIA SINCE THE 19th CENTURY

An Overview

Mankind has always had to contend with problems arising in the natural world, from earthquakes, volcanoes, hurricanes, drought, disease and more. Since the development of modern technology, one can add failures of design, (e.g bridge collapses), improper use (human error) and pushing the boundaries of knowledge too far. Cumbria has a long list of all of these - one wonders if an undue share. This article highlights some of the worst since the 19th C. Each event would have had a major impact on its local community, both in economic and psychological terms.

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|----|---------|-------------------------|------------------------------|
| 1 | 1910 | Wellington pit disaster | |
| 2 | 1914-18 | World War I | |
| 3 | 1918 | 'Spanish' flu | Pandemic |
| 4 | 1920's | Haig pit fatalities | 1922,1928,1931 |
| 5 | 1930's | Mass unemployment | |
| 6 | 1940's | World War II | Bombing in Barrow |
| 7 | 1946 | Harrington pit disaster | |
| 8 | 1947 | William pit disaster | |
| 9 | 1957 | Windscale | Nuclear pile fire |
| 10 | 1986 | Chernobyl | Farming impact |
| 11 | 2001 | Foot & Mouth | Farming impact |
| 12 | 2005 | Major flood | Carlisle |
| 13 | 2009 | Major flood | Cockermouth & Derwent valley |
| 14 | 2010 | Multiple shootings | West Cumbria |
| 15 | 2015 | Major floods | Appleby, Kendal, Glenridding |
| 16 | 2020 | Coronavirus | Pandemic |

In the early years covered by this overview the records of the events was entirely hand-written and analysing these a painstaking task. In addition there was (and still often is) no common accord as to what should be included and what excluded. Since many a government wanted to present the best or the least – worst picture, true comparisons are difficult. It also means that many differing reports of these kind of events draw their data from different sources giving different figures. Thus all numbers given below must be regarded as indicative rather than verifiable truth.

All items below have a large number of entries on the Web, with great amounts of detail and often severe criticisms of the management of the event by the government of the day, as well as 'conspiracy' theories. Where possible (done in most cases) there is a link to an Official Report about the episode, whilst further information may be given in the endnotes.

1) 1910 WELLINGTON PIT

Underground fire and explosion of firedamp propagated by coal dust, ignition caused by safety lamp, 137 lives lost

[Link to The Official Report:](#)

(from the Durham Mining Museum website:),¹

2) 1914-1918 WORLD WAR I: Impact on Cumbria

It appears that apart from the submarine attack on Lowca, Cumbria did not see any direct enemy action. It did however provide many of the troops.

Unfortunately if there are any accurate statistics of how many Cumbrian men served in the forces and how many died or were severely injured, such data has not been found. It also contributed substantially to the war effort.

Lowca Submarine Attack:

In the twilight hours of 16 August 1915, a German U-boat broke the surface off Parton Bay on the West Coast of Cumbria, and proceeded to shell the small village of Lowca. The target was the Harrington Coke works that produced Toluene, which was an essential constituent in the manufacture of the high explosive TNT. 55 shells rained down on the factory and the surrounding area, and not one single shot was fired in return. By the time the U24 disappeared below the waves only a dog was killed, no significant damage was done to the chemical works and both sides began to use the incident for their own propaganda.

[Link to more detailed report.](#)

[Link to more background](#)

Other major contributions to the war effort are listed in the endnotes.²

3) 1918 FLU PANDEMIC

This influenza outbreak, commonly known as Spanish flu, wasn't restricted to Spain and it did not even originate there (recent research by Olson et al. (2005) suggests that the epidemic originated in New York due to evidence of a pre-pandemic wave of the virus in that city).

But it was named as such because Spain was neutral in the First World War (1914-18), which meant it was free to report on the severity of the pandemic, while countries that were fighting tried to suppress reports on how the influenza impacted their population to maintain morale and not appear weakened in the eyes of the enemies.

The influenza outbreak started in the Northern Hemisphere in the spring of 1918.³ The virus spread rapidly and eventually reached all parts of the world: the epidemic became a pandemic. The scale of the pandemic is the source of much scientific debate with many widely varying figures being produced.⁴ The extent of the deaths from this in Cumbria has not been found.

4) 1922-1931 HAIG PIT DISASTERS: It would seem that this pit was particularly bad for methane (firedamp).

1922: Explosion, firedamp propagated by coal dust, ignition caused by shot firing, 39 lives lost

[Link to the Official Report for 1922 disaster](#)

1928: Explosion, 13 lives lost

1931: Explosion, firedamp, ignition caused by shot firing, 27 lives lost

[Link to the Official report for 1931 Disaster](#)

Also M. Anderson, *'Northumberland & Cumberland Mining Disasters'*, Wharnccliffe Books, 2009.

5) 1930's MASS UNEMPLOYMENT

The 1929 the American stock market crash set off global economic shock waves. British exports, already falling in the 1920s, fell by half again and unemployment rose to three million. The National Government of 1931 cut benefits of insured workers by ten per cent. The Prime Minister, Ramsay MacDonald, faced the prospect of millions of workers relying on 'poor law relief', paid for by local ratepayers, who were hard pressed themselves. It became clear that the unemployed had to be supported from national taxation and not local rates - a process that was completed by 1934. Unemployment in Britain rose to 2.5 million (25 per cent of the workforce) in 1933. Worst hit were the areas of heavy industry (eg coal, iron, steel, shipbuilding) in Northern Ireland, Scotland, Wales and the north of England. These industries were already struggling because they had not modernised after the war and had been badly affected by competition from other countries. The Depression meant that now these industries crumbled. For example, when the coal mine,

the steel works and Palmer's shipyard closed down in Jarrow in the north-east of England, every single man in the town was made redundant and Jarrow 'died'. In Cumberland Maryport is quoted as 61% of the insured population being unemployed. The effect of the depression in West Cumberland was so severe that In 1934 the government passed the Special Areas Act. The Act identified South Wales, Tyneside, West Cumberland and Scotland as areas with special employment requirements, and invested in projects like the new steelworks in Ebbw Vale.

The West Cumberland Industrial Development Co. Ltd, was set up with the intent of building factories to let, of which the first was at Millom, whilst at Whitehaven the West Cumberland Silk Mills was established. Another great success was the re-opening of the Whitehaven coal mines in 1937, with help from the Nuffield Trust. The groundwork was also laid of attracting the fledgling Nuclear Industry to West Cumberland, and as a consequence the Royal Ordnance Factory Sellafield became the Windscale, and later the Windscale and Calder Works, of the UKAEA (now known as Sellafield Site). This soaked up the post-war labour released from the Sellafield and Drigg ROFs and from the declining mining and heavy industries of West Cumberland.

See also the Overview article in this database
[‘The Industries & Economy of Cumbria since 19th C’](#)

6) WORLD WAR II

The Barrow Blitz is the name given to the *Luftwaffe* bombings of Barrow-in-Furness. They took place primarily during April and May 1941, although the earliest *Luftwaffe* bombing occurred in September 1940. The town, with a population of around 75,000 in 1941, was targeted by the *Luftwaffe* mainly for its shipbuilding industry (similar to the Clydebank Blitz) which was one of the most sophisticated in the world and built many submarines and ships for the Royal Navy and Barrow's steelworks which were formerly the largest in the world. Many Barrovians believe the first sign of German interest of the town was in May 1936, when the Hindenburg Zeppelin flew very low and slowly over Barrow, which locals and government officials alike believed was spying on the shipyard, although it claimed to be simply carrying passengers on a luxury trip. The difficulty of solely targeting Barrow's shipyard meant that many residential neighbourhoods were bombed instead; 83 civilians were killed, 330 injured, and over 10,000 houses were damaged or destroyed during the Blitz, about 25 percent of the town's housing stock. Surrounding towns and villages were

often mistaken for Barrow and were attacked instead, while many streets in Barrow were severely damaged.⁵

Apart from the Barrow district, the rest of Cumbria only had 9 bombs fall, and whilst there were military establishments not too far away in most cases, these could hardly be described as attacks. Six of these produced no casualties and the other three a total of 10 (just one killed at Scotby)

But more recent information changes this. On the occasion of the 80th anniversary of the event, the Times Star (West Cumbria newspaper) published an interview with one John Roonan who witnessed the bombing of Maryport (July 21st 1940). He recalled the destruction of his favourite sweetshop with the death of its proprietors, his school (the British School was destroyed) and a further six people were killed. He also added that one should not forget those killed at the Royal Naval Armaments Depot at Broughton Moor. (No information).⁶

[Link to detailed data](#)

7) 1946 HARRINGTON PIT DISASTER

Explosion of firedamp propagated by coal dust, caused by opening of flame safety lamp, 15 lives lost.

[Link to Official Report](#)

8) WILLIAM PIT DISASTERS

1941 Explosion of gas produced by chemical action between water and burning carbon, 12 lives lost.

[Link to Official Report](#)

1947 Explosion, firedamp propagated by coal dust, ignition caused by shot firing in waste, 104 lives lost.

[Link to Official Report](#)

9) 1957 WINDSCALE FIRE:

This was the worst nuclear accident in Great Britain's history, ranked in severity at level 5 out of a possible 7 on the International Nuclear Event Scale. The fire took place in Unit 1 of the two-pile Windscale facility (now known as Sellafield, Cumbria). The two graphite-moderated reactors, referred to at the time as "piles", had been built as part of the British post-war atomic bomb

project. Windscale Pile No. 1 was operational in October 1950 followed by Pile No. 2 in June 1951.

The fire burned for three days and there was a release of radioactive contamination that spread across the UK and the rest of Europe. Of particular concern at the time was the radioactive isotope iodine-131, which may lead to cancer of the thyroid, and it has been estimated that the incident caused 240 additional cancer cases. No one was evacuated from the surrounding area, but there was a worry that milk might be dangerously contaminated. Milk from about 500 square kilometres (190 sq mi) of nearby countryside was diluted and destroyed for about a month. A 2010 study of workers involved in the cleanup of the accident found no significant long term health effects from their involvement. Tom Tuohy, Deputy General Manager who risked his life by going in to put the fire out, lived to the age of 90.⁷

[Link to the Report of the Board of Enquiry](#)

10) 1986 CHERNOBYL NUCLEAR DISASTER: The Chernobyl disaster was a nuclear accident that occurred on Saturday 26 April 1986, at the No. 4 reactor in the Chernobyl Nuclear Power Plant, near the city of Pripyat in the north of the Ukrainian SSR. It is considered the worst nuclear disaster in history and is one of only two nuclear energy disasters rated at seven—the maximum severity—on the International Nuclear Event Scale.⁸ Between 50 and 185 million curies of radionuclides (radioactive forms of chemical elements) escaped into the atmosphere—several times more radioactivity than that created by the atomic bombs dropped on Hiroshima and Nagasaki, Japan. This radioactivity was spread by the wind over Belarus, Russia, and Ukraine and soon reached as far west as France, Italy, and the UK with Wales and Cumbria being particularly affected.

11) 2001 FOOT AND MOUTH DISEASE⁹

There was a major outbreak of this disease which hit Cumbria badly (44% of the national total of 2,026 were here.). It was traced back to a pig-farm at Heddon in Northumberland, spreading to adjacent farms and some animals from there sold at the large livestock market at Longtown, releasing the problem throughout the county of Cumbria and wider afield. Culls and funeral pyres became widespread and eventually when an Army Brigadier was drafted into get a grip on the situation, 460,000 animals (mainly sheep) were buried at the one-time war airfield at Great Orton. The 893 Cumbrian farms which were infected lost all of their animals, whilst there also some 3000 situations where a cull of animals from 'adjacent farms' was made, with very few actually

showing infection when subsequently tested. Whilst there was some compensation from the government, the loss of herds or flocks built up over years or generations was a terrible blow. There was also a huge impact on tourism. By the time that the Cumbria epidemic was over there had been outbreaks throughout a large part of the County mainly concentrated in the lowland areas along the M6 corridor, though Eden and, to the North, through the Allerdale and Carlisle districts. The Southern Districts of Copeland and South Lakeland had only a small number of outbreaks, and the National Parks and the upland areas were relatively unaffected. Barrow-in-Furness District remained disease free. Many people in Cumbria suffered great hardship and distress as a result of FMD, and over nine months after the last case was reported, there was a continuing legacy of the events that took place. It was estimated that nationally 4.2M animals were slaughtered with costs of £1.28Bn to dispose of them and £1.37Bn in compensation.

Links to Detailed Reports:

- 1)[Link 1: Official Report](#)
- 2)[Link 2: Impact of FMD](#) (study by Newcastle Univ.)
- 3)[Link3 : National Audit Office Report \(whole country\)](#)

FLOODING: Cumbria is no stranger to floods. The mountain topography forces the rain-bearing clouds arriving from the Atlantic to deposit their moisture in large quantities with the catchment areas leading to floods lower down. It appears that the warming of the climate, which increases the amount of moisture in the clouds is producing more frequent severe flood episodes so that 1-in-100-year events are perhaps now looking at 1-in-25 years or even more frequent.

[Link to Met Office Data](#) much of the data below about flooding is taken from this website.

There are also many pictures available (but at a price) from <https://www.alamy.com/stock-photo/cumbria-floods-2005.html> and similarly for 2009 and 2015.

or search the Internet for 'photos cumbrian floods'

12) 2005 MAJOR FLOODS: Floods in Carlisle - January 2005

Heavy rainfall on Friday 7 January led to flooding in Carlisle on Saturday 8th January 2005. The rainfall was prolonged over the high ground of the nearby Lake District and Pennines, draining into the River Eden on which Carlisle is situated. Places in western Scotland and north Wales also recorded high rainfall amounts from this event because of similar conditions in a south-

westerly airstream.

Impacts: Three people were killed, many homes and businesses were flooded and schools were closed. There was widespread transport disruption with all of Carlisle's buses damaged. Appleby, Cockermouth and Keswick also had flooding. This was the worst flood to affect Carlisle since 1822.¹⁰

[Link to Met Office](#)

13) 2009 MAJOR FLOODS: Heavy rainfall/flooding in the Lake District, Cumbria - November 2009

Exceptionally prolonged and heavy rainfall on Wednesday 18 and Thursday 19 November led to severe flooding across parts of the Lake District. Some areas of high ground received more than 400 mm of rainfall in a 72-hour period, and Seathwaite, Cumbria, recorded 316 mm of rainfall within 24 hours. The associated high river flows and flooding problems were exacerbated by the very wet ground conditions - Cumbria had already received close to the whole-month November average rainfall before this event occurred. Many rivers in the Lake District exceeded their previous maximum flows by a wide margin,

Impacts: The worst-hit areas were affected by flooding from the River Derwent, draining an area of the southern fells and flowing through Borrowdale via Derwentwater and Bassenthwaite Lake to the coast at Workington. In Workington, a police officer died after the A596 Northside road bridge collapsed, and the town was effectively cut in half as the remaining road bridge in the town was also severely damaged by floodwaters. Cockermouth was also badly affected by flooding, with the town centre under two metres or more of floodwater and several hundred other properties also affected by flooding.¹¹ There was widespread disruption across the region including damage to further bridges. However, new flood defences in Carlisle built after the Floods in Carlisle – (January 2005) held firm.¹²

[Link to Met Office](#)

14) 2010 MULTIPLE SHOOTINGS

A shooting spree which occurred on 2 June 2010 when a lone gunman, taxi driver Derrick Bird, killed twelve people and injured eleven others in Lamplugh, Frizington, Whitehaven, Egremont, Gosforth, and Seascale before killing himself in the village of Boot.

[Link to the Official Report](#)

15) 2015 MAJOR FLOODS: December 2015: Heavy rainfall from Friday 4 to Sunday 6 December led to widespread flooding in Cumbria and across other parts of northern Britain. The flooding resulted from some exceptionally high rainfall totals exceeding 300mm across the Cumbrian fells; 341.4mm of rain fell

at Honister Pass, Cumbria, in 24-hours to 1800 GMT on 5 December 2015, breaking existing UK rainfall records, while at Thirlmere 405.0mm also set a new record for two consecutive rain-days (0900 - 0900 GMT).

Impacts: The severe flooding which resulted was exacerbated by the already very wet ground conditions, partly as a result of Storm Desmond. Many parts of north-west Britain had already recorded more than twice the monthly average rainfall during November. Across north-west England and North Wales, November 2015 was the second wettest November in a series from 1910; only November 2009 was wetter. Several thousand homes and businesses were inundated with floodwater across Cumbria, with parts of Lancashire, Northumberland and southern Scotland also affected. Carlisle was worst hit by severe flooding from the River Eden, but many other towns and villages in the area were also affected by flooding, and tens of thousands of homes across Cumbria and Lancashire were without power for several days. A number of bridges were swept away by floodwater, including Pooley Bridge, Ullswater, built in 1764. There were two fatalities and many road and rail links were cut, including the West Coast Main Line. Schools and hospitals were closed in the flood affected areas. In the Yorkshire Dales, Malham Cove waterfall briefly flowed again for the first time in living memory. Storm Desmond also caused disruption from some very strong winds, gusting at 50 to 60 Kt in exposed coastal locations, but by far the greatest impact was from the flooding.¹³

[Link to Met Office](#)

16) 2020 PANDEMIC – CORONAVIRUS COVID-19.

In 2020, the whole world was hit by a new very virulent virus originating in China. This pandemic was still raging at the time of this review but already in Cumbria the number of infections (as shown by tests) was as high as anywhere in the country due to high figures in the Barrow area with a significant number of deaths attributed to the virus ,mainly older people with underlying serious health issues. A fuller account of this episode must await a time when the virus has died out or at least under control to small proportions. Apart from the deaths and those whose health is otherwise severely damaged, the main impact will have been on the collapse of many commercial enterprises which were closed by government edict for over..... weeks.¹⁴

ENDNOTES – Further information

¹ <http://www.dmm.org.uk/names/n1910-01.htm> [Durham Mining Museum]

² Other major contributions:-

Mossband, and the Devil's Porridge: The biggest explosives factory in the world, which employed 30,000 people, was built on the border of Scotland.

Carlisle Shell Factory: Carlisle set up one of the first National Shell Factory's from scratch in five months as a response to the 'shell crisis' in 1915 in the recently vacated Territorial Army Drill Hall on Strand Road. An appeal was made for lathes and milling machines and expertise to train a largely female workforce and they were soon making 18lb. artillery shells for the government.

Boots & Shoes: The famous Kendal shoemaker, K Shoes, played a crucial part in keeping the armed forces supplied with quality, waterproof boots and shoes. During WW1; 60% of its production was for the government, resulting in a shoe shortage for the domestic market.

Seaplane Factory: Hill of Oaks on Lake Windermere was the birthplace of the seaplane as a weapon of war, and an important pilot training establishment for the Admiralty. Float planes were built and developed on the Lakeside and without this technology the Royal Navy Air Service would not have been distinguished from the Royal Flying Corps.

Walney Island Airships: Bombing raids on civilians by Zeppelins were foreseen as a new development to terrorise the UK population and threaten industry, so in 1912 it was decided Britain needed its own fleet of airships. On Walney Island, close to Barrow, a giant airship shed and a hydrogen gas plant was built to house the huge structures. By the end of the war fixed wing aircraft had proven themselves to be the future of powered flight and airship construction at Barrow ceased.

Submarine manufacture: Vickers Ltd Barrow shipyard built submarines for the Royal Navy, as it still does today, and large quantities of artillery pieces and munitions were also produced. Many of the navy's warships at the outbreak of war in 1914 had been built in Barrow during the arms race that preceded the conflict, and during the war the same yards produced fifty more submarines, six cruisers, a battleship, eleven cargo ships, an oil tanker, twelve canal barges and fourteen troop barges. Although many workers in Barrow were in reserved occupations, such as shipbuilding, dock and foundry work, which contributed directly to the war effort and therefore gave exemption from conscription, an appeal by the government for women to register for war work - which included the manufacture of armaments and munitions, factory work, clerical work, transport, farm work, nursing, postal work, police work, and sewing - led to an influx of women workers and a consequent rise in the population of Barrow from 68,000 in 1914 to 90,000 at its peak in 1917. Dilution of tasks (the employment of several women on parts of a skilled man's work, often divided into simplified sections) meant that more women were employed than men were lost to active service. The town's other employers, such as the iron works and foundries, docks, trams, buses, railways and shops also hired women to do what had before the war been seen as men's work. The rise in population in a town already notorious for its overcrowding, coupled by two strikes at Vickers Ltd in 1916 and 1917 which raised fears that insufficient housing, high rents and the practices of dividing families in different houses and sharing beds between different shift-workers could lead to social unrest, acted as a stimulus to house-building, both by the local government and by Vickers Ltd which built more streets in Vickerstown, the company's housing estate on Walney Island. Although rates of pay for women were only half to two-thirds of men's wages, many women gained economic independence for the first time in their lives, only to lose it again after the Armistice when men returned from active service to their jobs and ship and munitions orders were cancelled.

³ Olson D. R., Simonsen L., Edelson P. J., Morse S. S. (2005). Epidemiological evidence of an early wave of the 1918 influenza pandemic in New York City. *Proc. Natl. Acad. Sci. U.S.A.* 102 11059–11063. 10.1073/pnas.0408290102 Online [here](#).

⁴ Patterson and Pyle (1991) estimated that between 24.7 and 39.3 million died from the pandemic. The widely cited study by Johnson and Mueller (2002) arrives at a much higher estimate of 50 million global deaths. But the authors suggest that this could be an underestimation and that the true death toll was as high as 100

million. The more recent study by Spreeuwenberg et al. (2018) concluded that earlier estimates have been too high. Their own estimate is 17.4 million deaths.

For the epidemic in Britain see the following links

- 1) [Link1](#)
- 2) [Link 2](#)
- 3) [Link 3](#)

⁵ Bombing during mid-April 1941 caused significant damage in Barrow to a central portion of Abbey Road, completely destroying the Waverley Hotel as well as Christ Church and the Abbey Road Baptist Church. The town's main public baths and Essoldo Theatre were also severely damaged, however they were repaired within years. Hawcoat Lane is a street that is most noted for taking a direct destructive hit in early May 1941. Barrow has been described as somewhat unprepared for the Blitz, as there were only enough public shelters for 5 percent of the town's population; some people who lived in the town centre were even forced to seek refuge in hedgerows on the outskirts of Barrow. This shortage of shelters was believed to have led to excessively high casualties. Two fire watchers were killed in May 1941 when the hammer head crane they were stationed in at Vickers Shipyard was bombed by the *Luftwaffe*. The headquarters of Barrow's anti-aircraft defences was in the Furness Abbey Hotel, a sandstone building next to the former railway station by the ruins of the abbey, in a valley screened by trees, it would seem to have been an unlikely target. In May 1941 it was attacked and badly damaged by the *Luftwaffe*. Most of the hotel was subsequently demolished and the remaining part became a public house/restaurant known as 'The Abbey Tavern'. Barrow Central Station was heavily damaged on 7 May 1941; a First World War memorial located within it still bears the holes and gashes caused by the World War II bombings

⁶ (a) Allithwaite (4 casualties), Grange-over-Sands (3), Drigg, Haverigg, Appleby, Musgrave, Soulby, Scotby,(3), Waterhead.

(b) Times and Star, 23rd July 2020.

(c) <https://2ndww.blogspot.com/2007/10/ww2-civilian-war-dead-of-county-of.html> based on data from the Commonwealth War Graves Commission relating to civilian war dead. For a civilian to be included in the CWGC lists they would have either died during their duty in one of the wartime civilian services (NFS, ARP, etc) or died as the result of enemy action (e.g. bombing raids). This data shows 2 in Carlisle, 1 at Scotby, 5 at Millom, 1 in Whitehaven, 1 at Little Bampton.

⁷ More detail - <https://www.telegraph.co.uk/news/obituaries/1582801/Tom-Tuohy.html>

⁸ From

<https://www.theguardian.com/commentisfree/2019/apr/04/chernobyl-nuclear-power-climate-change-health-radioactivity> and <https://www.newsandstar.co.uk/news/16701429.thirty-years-after-the-chernobyl-disaster/>

England, enjoyed clear weather for several days after the Chernobyl accident, but rain started on 2 May, 1986 and fell heavily on the Cumbrian fells – 20mm in 24 hours. On the uneven, upland terrain, radioactive fallout pooled in rivulets and puddles. The needles on radiation detectors at the Sellafield (formerly Windscale) nuclear processing plant went upwards alarmingly, 200 times higher than natural background radiation. From 5 becquerels a square metre (Bq/m²), radiation levels in topsoil spiked to 4,000 Bq/m². Kenneth Baker, the then environment secretary, issued assurances that the radioactive isotopes would soon be washed away by rain. Two months later, however, levels rose yet higher to 10,000 Bq/m² in Cumbria and 20,000 Bq/m² in south-western Scotland, 4,000 times higher than normal. Scientists tested sheep and found their levels of caesium-137 were 1,000 becquerels per kilogram – too high for consumption. In the midst of general anxiety,

the Ministry of Agriculture, Fish and Food (MAFF) placed under restriction 9,800 UK holdings and more than four million sheep following the accident. The early predictions of caesium being washed from upland soils proved optimistic. The mineral-starved native plants efficiently drank up radioactive isotopes. Tiny micro-fungi moved caesium-137 from the roots to plant tips, where grazing sheep fed. Researchers added months, then years, to their predictions of how long the radioactive caesium would linger in the environment. Sheep on eight farms in Cumbria and 327 farms in North Wales were still subject to testing until June 2012 (26 years) One of the last farms where restrictions were lifted was at High Nook Farm at Loweswater.

As researchers monitored Chernobyl radioactivity, they made a troubling discovery. Only half of the caesium-137 they detected came from Chernobyl. The rest had already been in the Cumbrian soils; deposited there during the years of nuclear testing and after the 1957 fire at the Windscale plutonium plant. The same winds and rains that brought down Chernobyl fallout had been at work quietly distributing radioactive contaminants across northern England and Scotland for decades. Fallout from bomb tests carried out during the cold war scattered a volume of radioactive gases that dwarfed Chernobyl.

⁹ Foot and Mouth disease is a highly infectious disease which can hit cattle, sheep, pigs, goats (any cloven-hoof animal) There are minor outbreaks quite often which are usually contained very quickly. Apart from the suffering endured by the animal, it may well be fatal, and if not, severely reduce the value of the animal to the farmer The standard response is to cull all animals on the farm where it is found and in the adjacent farms to reduce the risk of it spreading.. In the last major outbreak, In October 1967, a farmer in Shropshire had reported a lame sow, which was later diagnosed with FMD. The source was believed to be remains of legally imported infected lamb from Argentina and Chile. The virus spread and, in total, 442,000 animals were slaughtered and the outbreak had an estimated cost of £370 million.

¹⁰ Weather data: January 2005, on the 7th a westerly airstream affected the UK with a near stationary weather front across northern England and southern Scotland. A very deep depression then tracked eastwards across southern Scotland on the 8th. The highest rainfall (180.4 mm) was recorded at Rydal Hall, Cumbria and this is estimated as likely to occur less often than once in 200 years. Many places had over 100 mm of rain in one day with several having a 1-in-over-30 years event.

¹¹ The recovery in Cockermouth led to a new initiative to restore the 18th-century shop buildings more in keeping with their origins. The venture by the town's Civic Trust led to four national awards and the publication of a booklet 'Main Street Reborn' with before and after photographs.

¹² Weather data: November 2009, between Wednesday 18th and Friday 20th a warm, moist south-westerly airstream was affecting the UK associated with a very deep Atlantic depression tracking slowly north-eastwards between Scotland and Iceland. A weather front within this airstream brought exceptionally prolonged and heavy rainfall as the air was forced to rise over the higher ground of the Lake District - this feature persisting across northern England for around 36 hours. The highest rainfall occurred at Seathwaite in Borrowdale, which recorded 316.4 mm in 24 hours - a UK record for any 24-hour period. 377.8 mm was recorded there in a 34-hour period. Within a 72-hour period from 0900 on Tuesday 17th to 0900 on Friday 20th, the high ground toward the lower end of Borrowdale received more than 400 mm of rainfall.

¹³ Weather data: December 2015, the analysis chart for 1200 GMT on 5 December shows a deep Atlantic low pressure system to the east of Iceland, with associated fronts stretching across northern Britain. The UK was located in a mild, moist southwesterly airstream with these fronts bringing exceptionally prolonged and heavy rainfall as the air was forced to rise across high ground. This mechanism, known as a 'warm conveyor', brought extreme orographic enhancement to the rainfall, with the chart remarkably similar to the Heavy rainfall/flooding in the Lake District, Cumbria - November 2009 and Floods in Carlisle - January 2005 Cumbria flood events.

At 27th May 2020 the following were reported at <https://www.worldometers.info/coronavirus/#countries>

| Area | Cases | Deaths |
|-----------------------------------|--|---|
| Global | 5,699,000 | Deaths: 352,494 |
| UK | 265,227 but it was known that many more were untested and unreported | 59,297 (excess over normal deaths at this time of year) |
| Cumbria (to 15 th May) | 2,200 | 459 |

Updated Figures go in here when article is ready for entry to database.