

ART. XVI – *The Story of Seathwaite Tarn Reservoir*

By DR PATRICK HOYTE

SEATHWAITE Tarn is situated 1,214 feet above sea level, high up on the west side of the Coniston fells at GR 253988. It is based firmly on material of the Borrowdale Volcanic Series – surface lavas derived from silicate magma thrown up and moulded by the intense volcanic activity and major tectonic plate movement of the Silurian period around 440-420 million years BP. The rocks which were formed on subsequent cooling are classified as “andesitic” – made up of fine-grained sodium-rich feldspars.¹

This initial process of “land shaping” was completed by the much later Ice Age – predominantly between about two million and 10,000 years ago. The major lasting influence came from the most recent glaciation – the Devensian, up to around 18,000 years BP. (The Duddon Valley and its surroundings were not affected by the much more minor Windermere/Loch Lomond stadial of 11,000-10,400 years BP.²)

The main glacier in the immediate area would have been in the enormous trough between the Wrynose and Hardknott Passes, with its outflow advancing via Cockley Beck between the slopes of Grey Friar (2,536 feet, GR 260004) and Harter Fell (2,140 feet, GR 218997) into the present Dunnerdale. Steepening of the sides of this main valley left a number of side combs cut off and hanging in the air. The most characteristic, because of corrie formation as well, is the hanging valley between Grey Friar and Dow Crag (2,555 feet, GR 262978) which contains Seathwaite Tarn; whose outflow stream cascades some 650 feet down into the flat land of Tarn Beck, and then another 330 feet into the River Duddon itself.

Although there might well have been some glacial flow over the ridge from the north-east, the Seathwaite corrie would have been the site of glacial activity of its own – accumulation and compaction of snow to form glacier ice, with erosion and abrasion then deepening the basin and enlarging it by sapping back at the surrounding rocky walls.

Almost all Lake District corries have a north or north-east aspect because of reduced solar warming from that direction, and because the predominantly south-westerly winds would have induced more drifting of snow on the leeward sides of the mountain ridges. The Seathwaite corrie is the striking exception to this rule – the only significant corrie in Lakeland which faces south-west.³

While the main basin of Seathwaite Tarn is a hollow eroded from the solid rock, studies have shown that there is also a considerable overlying deposition of laminated glacial clay. This would have been formed by seasonal melt from snow-beds, or glacial ice draining into the tarn from remnant snow fields higher up.⁴

Human Activity

Following the Ice Age, the climate of Europe was generally warmer and drier than at present. This and the subsequent deterioration in weather conditions towards the

end of the Bronze Age are clearly demonstrated by studies of peat and lake sediments, which also show the development of a long period of fairly stable forest cover over the higher fells, mainly with pine and birch (*Pinus* and *Betula*).⁵

Pollen studies from Seathwaite Tarn⁶ show a subsequent general decline in upland forest, with replacement by hill grassland and heather moor. This can be dated to 1080 BC \pm 140 years. Although the shallow mineral soil was probably not very good anyway, the decline is almost certainly indicative of pastoral land use – the deliberate felling of trees and/or the extensive grazing of animals with secondary failure of tree regeneration. This theory is borne out by the distribution of Bronze Age relicts in the locality and at the same dated horizon. The pattern of burial cairns and enclosures above Stonestar (GR 203913) and on the southern slopes of Caw (GR 231944) points to considerable settlement.⁷

The nearest community in Bronze Age times was probably as now down in the Tarn Beck valley at GR 228960. It would not however have been called Seathwaite or have passed its name on to the tarn until at least the Viking era of the tenth and eleventh centuries, the name being so clearly derived from the Scandinavian (though usage of the separate elements may not in fact have commenced until after the Vikings had gone): *saetr* – shieling or summer pasture, *pveit* – clearing. This apparent clarity is however confused by one of the old gazetteers which refers to “Seathwaite” for the village and “Sleathwaite” (of unspecified origin) for the tarn.⁸

Seathwaite remains a small village even today (1991 population: 152), its only “claim to fame” being the exemplary life of the Reverend Robert Walker who was the curate at Seathwaite Chapel from the time of his marriage in 1736 until his death in 1802 at the age of 93. “Wonderful Walker” was husband, parent, priest, schoolmaster, publican, farm worker, spinner and weaver all rolled into one; he even wrote petitions, wills and deeds of conveyance for his more rustic parishioners. The contemporary histories (perhaps over-influenced by Wordsworth’s idealised portrayal of Walker in the *Notes* to the Duddon sonnets⁹) make much of his “pastoral devotion, piety and self-sacrifice”; and of his “frugality and good management”, as typified by the eventual legacy to his large family of £2,000 – from an annual stipend which never exceeded £50¹⁰ (a stipend which incidentally included the right to net fish from Seathwaite Tarn).

Mining

Up at the tarn itself, man’s only pre-1900 incursion was the Seathwaite Copper Mine where three tunnels were driven into the fellside sometime in the years between 1750 and 1850 – Lower Level at GR 261993, Middle Level at GR 265994, Upper Level at GR 266997. Although the levels were all about 600 feet long, production was never sufficient to justify even a cart-track up to them, packhorses being used to take the ore from the mine to the nearest railhead (once there was a railhead) at Broughton-in-Furness. The mouths of the levels are buried today, the only visible remains of the mine being a few spoil heaps and ruined sheds.

Seathwaite was the only mine on the western side of the Coniston massif. Although it is a mere 1.5 miles as the crow flies from the highly successful Coppermines Valley on the other side of the fell, the quality of the ore on the west side was clearly insufficient to attract any prolonged investment.¹¹

Water for Barrow-in-Furness

Barrow today is a busy and more or less thriving industrial town, though much hit in recent years by unemployment associated with the decline of the shipbuilding industry; but until the early 1800s it was an insignificant North Lancashire hamlet with less than a dozen dwellings. Ulverston was much the most important town in the area with a population of some 4,000, and even Dalton housed 500 people.

It was to be 1869 before the population of Barrow “overtook” the Ulverston/Dalton combination, as part of a slow but steady expansion occurring in the context of the Industrial Revolution and pushed on by the efforts of Sir James Ramsden, H. W. Schneider, and the Dukes of Devonshire and Buccleuch: the initial use of Barrow as a port for the exploitation and shipping out of the rich iron ore deposits from the local area; the choice of the town as the headquarters of the Furness Railway in 1846; the 1857 decision of a mining company to manufacture iron and steel locally rather than merely “export” the ore; and the consequent introduction of large-scale iron shipbuilding at Barrow in 1870.¹² The population of the town rose in direct consequence of these developments, from around 700 in 1850 to a peak of 82,144 in 1916;¹³ the current population is only around 50,000 however.

The rising needs of this community and of local industry required consistent supplies of water, but until 1863 Barrow had to rely on the traditional – wells, cisterns and rainwater butts. The Barrow Gas and Water Company was formed in 1863 as a subsidiary of the Furness Railway; the name changed to Furness Gas and Water Company in 1864, and the whole then passed into the ownership of Barrow Corporation in 1868. A large local reservoir was built at Poaka Beck in about 1865, and there were others at Infield, Longreins and Pennington (1876).¹⁴ But by 1891 the annual water supply to consumers had risen to 830,430,000 million gallons (36 per cent going to the works and mines of the Barrow Haematite Steel Company Ltd.)¹⁵ and the Corporation had to start looking further afield.

An application to Parliament for abstraction from the River Duddon was unsuccessful in 1892, but a fresh assault was mounted at the turn of the century, the Corporation in the meantime having discounted the possibility of abstracting from Torver Beck. This would have taken water from Coniston, but at some considerable expense because of the pumping which would have been necessary.¹⁶ The eventual Barrow Corporation Act 1901 therefore authorised the abstraction of water from the River Duddon; and the damming of Seathwaite Tarn to provide compensation water for the river in accordance with the fluctuating requirements of demand at Thorncliffe Road Reservoir, Barrow.

There had been three main petitioners against the proposals, all with much the same problems in mind. The Hodbarrow Mining Company Ltd. had built a pier, wharf and railway on the Duddon estuary at Salthouse; and the Millom and Askam Haematite Iron Company Ltd. had made similar harbour arrangements at Borwick Rails. Both of these industrial undertakings (and Millom Urban District Council) were concerned that the low-water channel serving the two areas might be compromised if the river flow fell because of insufficient compensation¹⁷: “Barrow has no right to come and cause us a possible injury”.¹⁸ The main spokesman for Barrow (G. H. Hill, independent consulting engineer) was however adamant:

The present water circumstances of Barrow are exhausted now; it is not a question of how long they can go on, they ought to have been in Parliament before now . . . the small quantity to be extracted cannot possibly do any harm to this particular channel.¹⁹

After the enactment of the Bill, the next obstacle was that of ownership. At the time of his death in 1875, William Sawrey Rawlinson was the owner of the Duddon Hall estate (including Seathwaite Tarn) and Lord of the Manor of Dunnerdale-with-Seathwaite. Rawlinson had five sons, but as none of them was over 25 as stipulated in his will, the estate passed to the care of trustees – of whom only Mrs Elizabeth Rawlinson (his widow) was still alive in 1901. The problem of differentiation between personal estate and real estate, with the former having the priority to draw funds from the latter in the event of there being insufficient resources for specific legacies, had to be resolved by the High Court,²⁰ a process which took two years; but in the end Mrs Rawlinson was empowered to sell Seathwaite Tarn and the adjoining land to Barrow Corporation. This she did for £15,000, although the rights to hunt, fish, maintain a boat-house, and mine for minerals were reserved to the Duddon Hall estate.²¹

In 1907 however, all these claims were given up when a Committee of Seathwaite Commoners (appointed in accordance with the provisions of the Lands Clauses Consolidation Act 1845 incorporated with the Barrow Corporation Act 1901) agreed to the “extinguishment of common rights” over the tarn, the boat-house and all the adjacent lands in return for total compensation of £700 paid by Barrow Corporation.²²

Building Works

The main contractor for the building of the dam and its related works was William Kennedy Ltd. of Partick, Glasgow; the on-site director being the aptly named W. P. Weir. Barrow Corporation’s “Engineer for the Works” and designer of the overall specification for the project was Augustus Strongitharm (still known as Colonel though his military service had ended many years previously): consultant civil engineer, J.P., member of Barrow Town Council since 1876, Mayor of Barrow 1889-1892, and past Chairman of the Council’s Gas and Water committee.²³

Apart from detailing every aspect of the Works, one of Col. Strongitharm’s main concerns was of course quality control:

All workmanship shall be of the best description . . . The greatest care must be taken that the Dams and Wall are built perfectly true in every respect to the lines and curves shown upon the plans and sections . . . All materials used in the execution of the Works are to be of the very best quality of their respective kinds, and are to be to the approval of the Engineer.²⁴

The eventual contract, for which Kennedys had submitted the lowest tender, was made up as follows:

	£
Dam and works at the tarn	29,189
Road from Long House to the tarn	2,666
Weir on River Duddon	6,001

Parliamentary expenses, land purchases, easements and compensation totalled a further £145,340.²⁵

The works at Seathwaite were completed at the end of September 1907, and the contractors removed all their equipment from the area around the tarn. Col. Strongitharm withheld his Certificate of Completion however, as the dam was

leaking in four separate places – although he had some difficulty in identifying them. At first Kennedys denied the leaks at all, but they later attributed them to inappropriate “proportion, deposition and mixing” of the concrete; i.e., to basic faults in Strongitharm’s original Specification:

The Dam to be built with 1 to 5 Cement Concrete with displacers, and faced with 12 inches of 4 to 1 fine Cement Concrete . . . and it shall be made perfectly watertight . . . As each layer of concrete is deposited it shall be levelled, well trodden down and rammed until it is perfectly solid, and in the outer portion of the work rough lumps of stone not larger than two men can conveniently handle [displacers] shall then be bedded and well beaten down into the concrete.²⁶

At a cost of £74 therefore, a second contractor had to be brought in to coat the dam with “Szerelmey Stone Liquid”; the question of who paid being finally decided by a High Court action in 1908.²⁷

The Corporation eventually assumed control of the whole project in November 1909 when a Certificate of Completion could at last be issued. The Duddon Waterworks, completed in 1907, were opened by Lord Richard Cavendish in July 1910.

Local impact – sanitation and riots

During the building work, between 75 and 120 men were housed in huts at the tarn for most of the summer months, and stone was quarried on site. Over the whole period, there was considerable concern about pollution of Tarn Beck. Some of this was due to building debris which should have been filtered out, but rather more significant was the contamination due to poor sanitary arrangements in the huts.

Letters from November 1904 show the concern of Ulverston Rural District Council and its Medical officer of Health;²⁸ and these were followed by more specific complaints from local householders who were entirely dependent on Tarn Beck for water for all purposes – agricultural, and more particularly domestic.

Moses Tyson of Tongue House Farm, Seathwaite, even pursued a claim to court in 1906, demanding £26 in compensation, but being awarded just £5 and £5 costs. More claims followed however and Kennedys repudiated liability at first, but in the end they contributed along with Barrow Corporation. Other official letters from the time show a somewhat cavalier approach by Col. Strongitharm on behalf of the Corporation, many residents only being promised a clean water supply “in due course”, with no interim help being offered.²⁹

The presence of an alien workforce gave rise to other problems too. In July 1904, the Newfield Hotel at Seathwaite was besieged by 50 drunken navvies after the landlord Thomas Dawson had been obliged to “stop the tap on them”. Windows and furniture were smashed, and the church and vicarage damaged as well. The landlord and his immediate helpers had to defend themselves with firearms, and three workers from Millom were injured – Foy and Kinsella recovered subsequently, but Cavanagh died a day later. Twenty constables were drafted in by the local authority to restore order (one wonders how long that must have taken); and the whole episode was reported in the local newspaper under the headlines:³⁰

RIOT AT SEATHWAITE
NAVVIES BECOME UNMANAGEABLE
FARMERS FIRE UPON THEM

Dawson, James Greenhow (barman) and Henry Knox Todd (assistant engineer from Kennedys) were arrested and charged with various offences,³¹ but a fortnight later all three were discharged with the charges dismissed. The local newspaper included a strong editorial supporting the decision of the Magistrates.³² A further week after that, the unpleasant event was closed when an inquest jury returned a verdict of “justifiable homicide”³³ (a conclusion not open to a coroner today); though Col. Strongitharm still managed to have the last, heavily hindsighted, word in a letter to the Town Clerk at Barrow:

I am very sorry to hear about the disturbance up at Seathwaite and certainly think the authorities are to blame in not having made some arrangement for extra police. I think there is a clause in the Conditions about the Contractors having to pay for any extra police the local magistrates may think necessary to appoint.³⁴

Description

The gravity dam of 1907 is a gentle arc 1,027 feet long, situated just outside the original margin of the tarn. The central section of 446 feet is of concrete with a slate facing, while the south flank is an earth embankment with a concrete core. The dam is entirely solid, with no internal walk-way. Its maximum height is just over 27 feet. This gives the reservoir a maximum depth of 85 feet, a surface area of 66 acres, and a total capacity of 648 million gallons (increased from 41 acres and 350 million gallons respectively³⁵). The figure of 648 million gallons includes “dead storage”; the “usable capacity” or volume above the lowest draw-off point is in fact 472 million gallons.

The initial overflow arrangements were by weir at the northern end of the dam, and a spillway in the centre. An additional weir was constructed through an adjacent rocky knoll in 1934; and in 1960 a subsidiary gravity dam of concrete was built, extending 138 feet northwards from the end of the original arc. The old spillway was filled in at this time, overflow being provided for by two new fixed weirs, 19 and 51 feet wide respectively.

Considerable remedial and refurbishing work to the main structure has taken place since. In 1974, 35 rock anchors were installed in the primary dam, and more were put into the subsidiary dam in 1991. In 1992, much of the primary dam’s slate facing was removed to allow the inspection and repair of areas of seepage.

The draw-off system consists of an 18-inch syphon and an 18-inch high level pipe, both channelled through the old valve house situated directly at the base of the dam, and from there into Tarn Beck. A new valve house was constructed 250 feet below the dam in 1970-71,³⁶ but operation of the equipment remains dependent on electrical generators and batteries as the remoteness of the tarn (access is by a steep unsurfaced track 1.5 miles long and really only negotiable by four-wheel-drive vehicles) precludes the installation of mains electricity. The generator powering the valves may be switched on and off manually, or via a radio-based remote link with the Ulpha Intake Works.³⁷

Rainfall, Catchment and Abstraction

The mountains of Cumbria are subject to heavy rainfall when they intercept westerly winds from the Atlantic, and the central fells regularly experience well over 100 inches of rain a year, with an average of 93 inches and 60 inches as the customary minimum; the average for England as a whole is 32.5 inches.³⁸ In these circumstances, upland reservoirs have some distinct advantages: the high level of rainfall collected is relatively pure because of its passage over the sea; the altitude; and the lack of polluting industry and “agricultural chemicals” in the catchment area itself.

The average rainfall at Seathwaite Tarn is around 100 inches a year, the highest recent figure being 115 inches in 1988.³⁹ The statistics presented to the Commons Select Committee in 1901 had shown the annual rainfall at Barrow to be as low as 41 inches, when taken over the three driest consecutive years. Strikingly, the rainfall at the tarn is on average some 25 per cent higher than at the Ulpha Intake Works only three miles away; there is however a difference in height above sea level of nearly 1,000 feet.

The catchment area of Seathwaite Tarn is approximately 1,185 acres in total, and is bounded by the ridge which runs: Grey Friar – Great Carrs – Swirl How – Brim Fell – Goat’s Hawse – Dow Crag. Drainage into the tarn is from many small streams, but particularly via Tarn Head Beck (including Far Gill and Near Gill as its tributaries) at the head and Bleaberry Gill at the foot.

The efficiency of the tarn and its rocky surroundings as a collecting system is amply demonstrated by what happened during the summer of 1995 when serious drought conditions prevailed. The tarn was full to capacity until the end of April, but by the end of September the level of water had fallen to a low point – only 41 per cent of the potential volume. Early October was very wet however, and the level was back at 100 per cent within as little as three weeks – most of that gain in the first week of October alone. Despite the drought, abstraction of 3-3.5 million gallons a day was able to continue throughout the whole summer.⁴⁰

Water from the Seathwaite Tarn valve house and overflows passes into Tarn Beck and ultimately into the River Duddon near Seathwaite village, two miles upstream from the North West Water Intake and Treatment Works at Crook of Duddon, Ulpha (GR 209947). After initial establishment in 1907, further authority to extend the works was given in 1970,⁴¹ but the current modern unit dates only from 1993. An intake weir and sluice-controlled intake pipes are “built in” to the river bed, and there are associated buildings housing straining and chemical plant and equipment; much of the works is underground. Water runs from Ulpha to Thorncliffe Road Reservoir, Barrow-in-Furness through a 22-inch underground pipe.

The need for compensation water in the River Duddon is assessed by a measuring weir downstream of the Ulpha intake, and is currently dependent on the 1970 *Licence to Abstract Water* from the river issued by Lancashire River Authority under the Water Resources Act 1963.⁴² The purpose of the licence is to safeguard the residual flow and to maintain suitable conditions for fish breeding.

Furness Water Board are authorised to abstract up to 250,000 gallons per hour, 6 million gallons per day or 2,196 million gallons per year. If this results in the Duddon flow (at the measuring weir) falling below 3.1 million gallons per day, then compensation water has to be released from Seathwaite Tarn to bring the flow back

to “not less than” 4 million gallons per day; a complex sliding scale operates for higher levels of natural river flow.

In practice, 3.5 million gallons per day of compensation water are provided much of the time. The reliable yield is as high as 5.5 million gallons daily, but at the present time Seathwaite Tarn is not being exploited fully, industrial demand in the Furness peninsula having dropped in recent years with the relative decline in ship-building at VSEL (Vickers) and the closure of British Cellophane. Two major customers do however remain – Scotts Paper Mills, and the new power station at Roose (GR 223683) which needs considerable quantities of water for the management of flue gas emissions. It would be uneconomic to “export” Seathwaite Tarn water into the Haweswater or Thirlmere aqueducts as a great deal of pumping would be required.

Increased demand in the areas around Barrow in the early 1970s had in fact led the North West Water Authority to actively consider a second attempt at abstracting from Coniston Water, but this idea was ultimately rejected in favour of a 17-mile pipeline taking water from the Haweswater aqueduct and feeding Kendal, Grange-over-Sands and Ulverston on the way to its eventual destination at Barrow. This scheme was completed in 1985.⁴³

Ecology and Environment

Soil overlying rocks of the Borrowdale Volcanic Group generally becomes shallower with altitude and steepness. On the lower slopes below about 1,000 feet, there tends to be a mixture of acid peat and brown stony podzolic loams; while higher up the soil covering is thinner and more acid, though often mineral rich. The overland flow of water – clearly the most dynamic element in the inert physical landscape – then comes into play as the soil simply cannot hold heavy rain for very long. On the high fells, this is known as “sheet-wash”; and its eventual effect is to produce tarn or reservoir water of considerable acidity (pH often as low as 5.0) with a consequent effect on the growth and/or development of trees and freshwater life – for example, both trout and char used to be abundant in Seathwaite Tarn, but only brown trout exist today. This problem has been complicated in recent years by the even more adverse contribution of “acid rain” – atmospheric water polluted by waste gases from industrial processes and motor vehicle exhaust emissions.

In response to this challenge, the Institute of Freshwater Ecology (based at the Freshwater Biological Association’s headquarters at Ferry House on Windermere) has carried out research at Seathwaite Tarn since 1991, examining the feasibility of reversing water acidity by fertilization with phosphorus.

Phosphorus encourages the growth of phytoplanktons (floating or drifting plant organisms found at various depths in the oceans or in bodies of fresh water) whose demands for nitrogen are subsequently met by nitric acid taken up from the tarn-water. Decreased acidity is signalled by an increase in pH level. To this end, liquid phosphorus fertilizer has been added to the water of Seathwaite Tarn since 1992; with a consequent and significant pH increase from around 5.1 in 1991 to around 5.6 in 1993, and an accompanying change in the ratio of micro-crustacean filter-feeding zooplanktons. *Holopedium giberum* is a relatively rare species, usually found in nutrient-poor waters, whose numbers have fallen off markedly since

phosphorus fertilization. By contrast, *Bosmina coregoni* (usually found in lakes able to support modest growths of phytoplankton) has increased its numbers tenfold over the same period, clearly playing a major part in the recycling of phosphorus and the accumulation and deposition of organic matter as sediment. Larger organisms which could do the job better (for example, *Daphnia*, the water flea) have yet to move in to Seathwaite Tarn, although the pH and phytoplankton levels (indicators of low acidity and high food value respectively) would now be sufficient to sustain a flourishing population.⁴⁴

On a larger scale, there is inevitably much evidence of change to the local environment. The long (but fortunately low) dam is dark and ugly, and there is uncleared debris from old building and remedial work. Weather conditions at such a relatively high level are obviously against the planting of trees for screening purposes, but the tarn is in any case hidden from view to all except those walking and climbing on the immediately adjacent crags. This relative inaccessibility means that not many people see the reservoir therefore; and for those who do, the present view across the tarn to the north-east can in fact be very little different from the same view a hundred years ago before the dam was built, or indeed 3000 years ago just after the Bronze Age decline in upland forest – the whole aspect is lonely, wild and desolate, and has been so for many centuries.

Conclusion

Seathwaite Tarn is a distinctive and outstanding natural feature modified in the early years of this century to provide a significant resource for a developing conurbation. Some of the local need for water has been reduced in recent years because of the nationwide decline in manufacturing industry and by the long-distance diversion of water supplies from the Haweswater aqueduct, but usage nevertheless continues at a significant rate.

This sort of integrated lake and river catchment system is seen by the majority of water companies as the most attractive way of providing a service; it is comparatively inexpensive to set up when weighed against full-scale reservoir operations, and can be highly efficient when compensation water is as readily available as it is in the Seathwaite/Ulpha complex.⁴⁵

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- ¹³ *Ibid.*, 130.
- ¹⁴ *Ibid.*, 114.
- ¹⁵ Barrow Corporation Water Bill 1892. *Notes of Proceedings and Evidence at the House of Lords Select Committee 1892*, 25. Held at Cumbria Record Office, Barrow (hereafter CRO (B)).
- ¹⁶ Barrow Corporation Water Bill 1901. *Notes of Proceedings and Evidence at the House of Commons Select Committee 1901*, 69. Held at CRO (B).
- ¹⁷ *Ibid.*, 6-8.
- ¹⁸ *Ibid.*, 147.
- ¹⁹ *Ibid.*, 105, 147.
- ²⁰ *In re Barrow-in-Furness Corporation & Rawlinson's Contract* [1903].
- ²¹ CRO (B). Unsorted papers of Town Clerk's Dept relating to Duddon Waterworks, Box 1. Agreement of Elizabeth Mary Rawlinson, June 1901.
- ²² *Ibid.*, Box 3. Committee of Seathwaite Commoners Deed of 4/4/07.
- ²³ An important sociological footnote comes from this period. Although the first modern typewriter had appeared in 1872, its use did not spread to Barrow Town Council until after the turn of the century. Col. Strongitharm therefore employed a scribe, who clearly took some letters by dictation and composed others himself. The County Record Office papers for 1904 include a rather pathetic letter from the scribe to the Town Clerk asking for a job "now that Col. Strongitharm no longer has any use for my service".
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