

# **A short timeline of the new floodplain meadow site at Great Ayton and its immediate area**

**Martin Allen, October 2023**



## **Summary**

The site has been through many changes of land use; we have records of it being parkland and pleasure shrubbery around the mid Nineteenth Century, to being turned into a lake in the early Twentieth Century, then to a playing field by 1959, making the option of a temporary lake as part of the 2011 flood alleviation scheme and finally the decision to convert the mown grass playing field into a floodplain meadow in 2019.

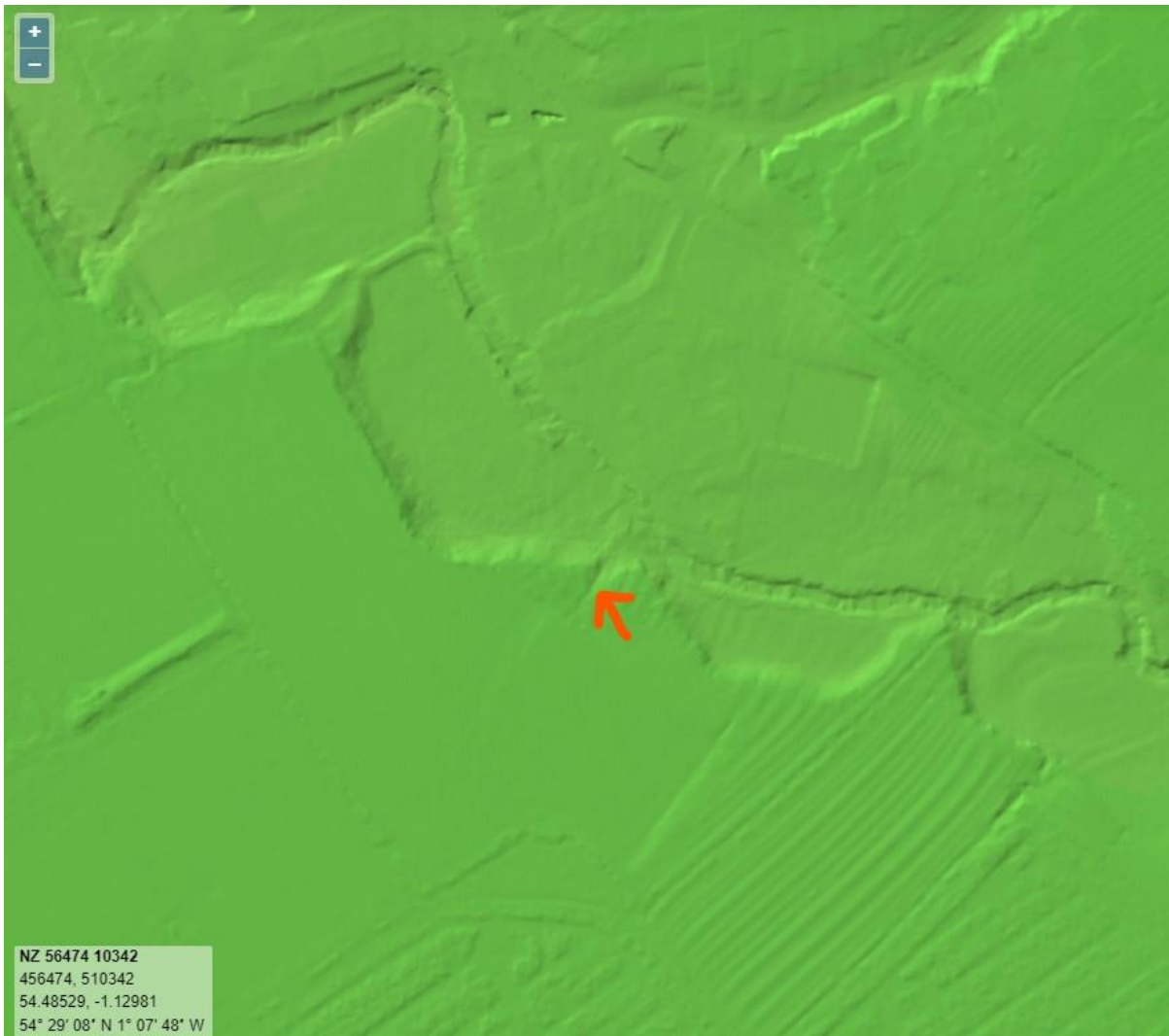
## **Geology**

The River Leven runs through an area almost entirely of till (boulder clay) i.e. clay with pebbles/boulders and lenses of gravel which was deposited from the Devensian glacial period. Alongside the Leven there is a narrow belt of post glacial clay, sand and gravel. The solid geology underlying this part of the Ayton area is of Jurassic age. The rocks are Redcar Mudstone, cropping-out only in a small area in the river close to the weir next to the floodplain meadow (information via David Taylor, Great Ayton History Society – thank you).

The soil within the meadow (noted from mole hills) looks to be a loam, fairly light and sandy in places near the riverside, but heavier and wetter to the south of the site.

## Medieval Period

A probable medieval hollow-way to the southeast leading to the existing footbridge area shows clearly on the LIDAR image below (red arrow points to it) but is currently not as noticeable on the ground given the presence of dense shrubs growing on or adjacent to it. It is possible that this place was historically a ford across the river. The hollow-way is also on or immediately adjacent to the boundary line created in 1782 between Great Ayton and Little Ayton Parishes.



The wide ridge and furrow visible on the grassland area to the south-east of the hollow-way is typical of early medieval ploughing and the plough has clearly continued from the land to the south down the slope towards the River. Of interest on the slope area are two patches of Great Burnet and one of Common Bistort, both long-lived plants of damp meadows. On the lower area, adjacent to the river, patches of Wood Anemone grow amongst the grass and on patches on the slope; we typically see this as a woodland wildflower, but it also flourishes in damp undisturbed pasture.



The presence of the wide ridge and furrow and the three plant species mentioned suggest that this land area may not have been ploughed for hundreds of years (possibly since approx 1350 AD when black death reduced the population by a third to a half with consequent reduction in area ploughed). It is possible that although this field has not been ploughed that it has been sprayed with weedkiller at some point in the more recent past (1970s/80s), killing off much of the broad-leaved wildflowers that were present and leaving only those that have leaves that die down in the summer like Wood Anemone and any wildflowers on steep slopes, alongside the grasses.

**Enclosure of the Great Ayton occurred in 1658** and this would be when the main hedgerows were planted around the boundary of owners' allotted land. There are no Enclosure hedges adjacent to the floodplain meadow site but the straight hedge to the south-west of the playing fields (and its adjacent ditch) could well be such a hedge.

"The motive for enclosure was the desire by freeholders to profit from the booming trade in dairy products, by raising cattle on enclosed pasture rather than pursuing arable farming."

<http://greatayton.wdfiles.com/local--files/agriculture/Enclosure-of-the-Open-Fields-in-1658.pdf>

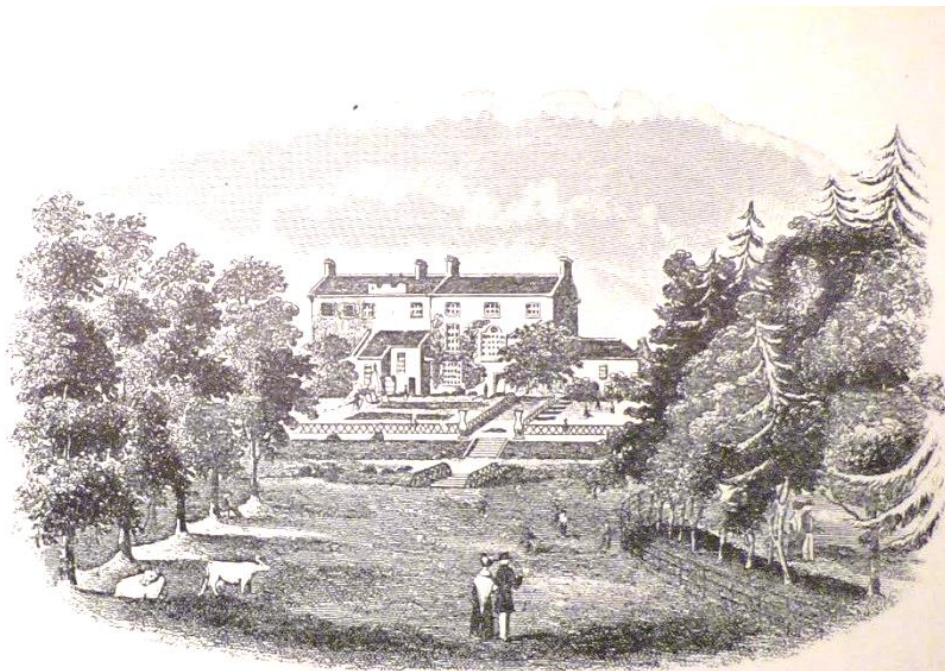
**1788;** A possible time for the weir on the River Leven (adjacent to the floodplain meadow site) to have been built as a flax spinning mill to create thread for Linen was started on the river corner and would have needed water to power the mechanised spinning machines. At the same time as building the weir, the flood bank adjacent to the river (shown in the engraving of 1841) would have been built to enable a suitable depth of water to be held behind the weir enabling the mill to be powered for a set length of time until the water ran out when the sluice gates were closed for the water level to build up again. In the 1840s the Mill was bought by the Friends school and converted for corn grinding, threshing and sawing.

**1840 Flood.** There have been many floods that caused damage along the River Leven but a particularly notable one for which there is evidence was on 22<sup>nd</sup> July 1840 when an extraordinarily intense summer storm during the previous night caused the failure of two dams in Kildale sending a two-metre high wave of water through the village, undermining some of the buildings and flooding buildings in Stokesley. This flood



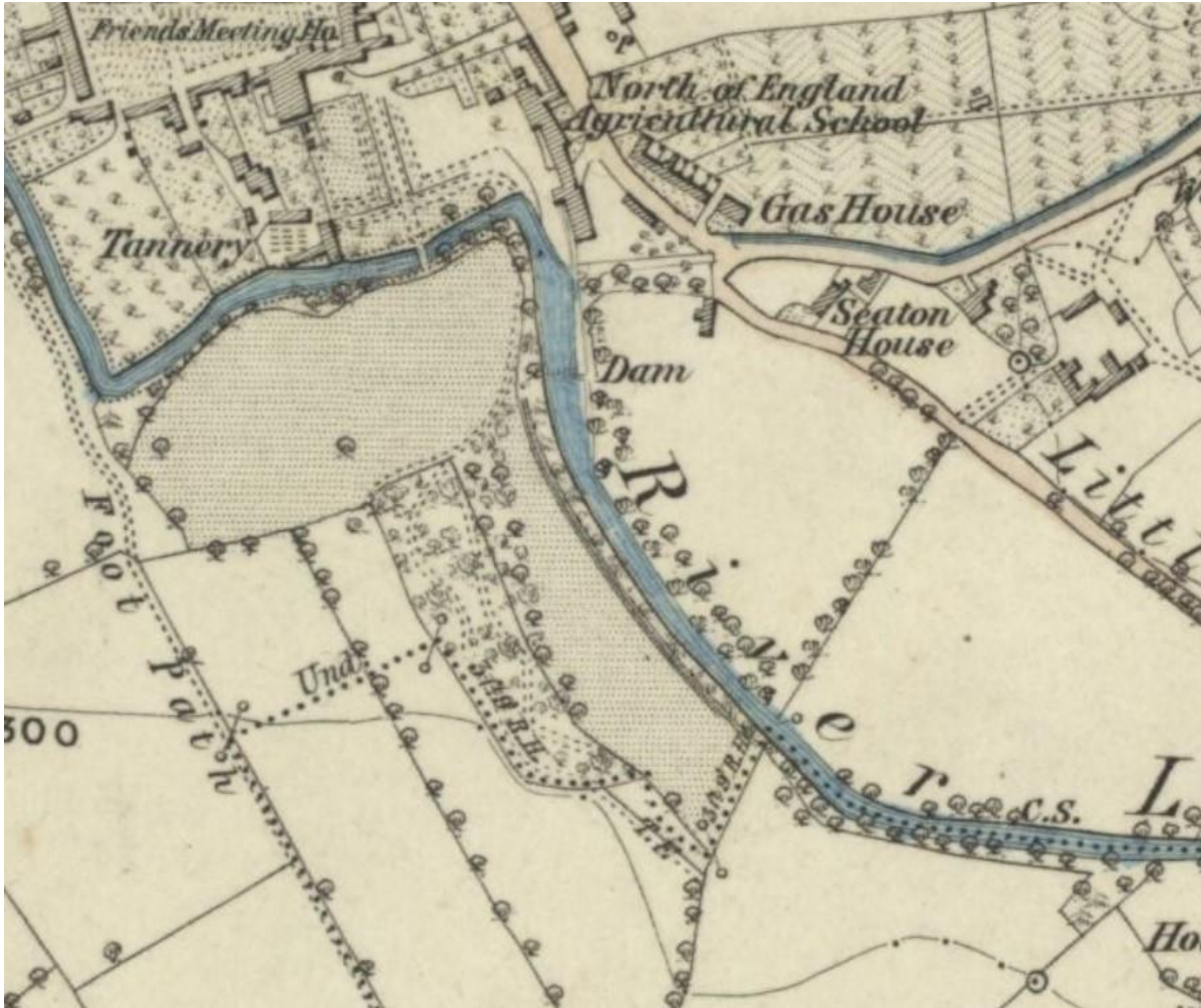
swept away the dam in Waterfall Park, which was rebuilt in its present form by the local benefactor Thomas Richardson. Although not mentioned in newspaper reports river flooding often deposits layers of mud and debris on top of land within the floodplain effecting the plants growing there by adding nutrients or smothering smaller ones.

There is an engraving of the site **dated 1841** when the nearby Society of Friends (or Quakers) school was founded, showing a line of trees (planted on mounds, a technique used then on damp ground) with cows grazing under the trees and looking at the back of the Ayton School (taken from <http://greatayton.wdfiles.com/local--files/schools/Friends-School-Great-Ayton-Last-50-years.pdf> ). There also appears to be a couple on a path on top of the flood bank adjacent to the River Leven with an iron park/estate fence to keep the cows away from the river. The site slopes down towards the River Leven rather than being the flat site we know today. Although the date is before the first edition Ordnance Survey map, no conifers are shown on that map so perhaps they were felled and the tall conifers shown in the second edition Ordnance Survey map (which was surveyed in 1892) were planted afterwards. The image of the Friends' school is an earlier building to that shown in the 1853 Map, the extension being added in 1846.

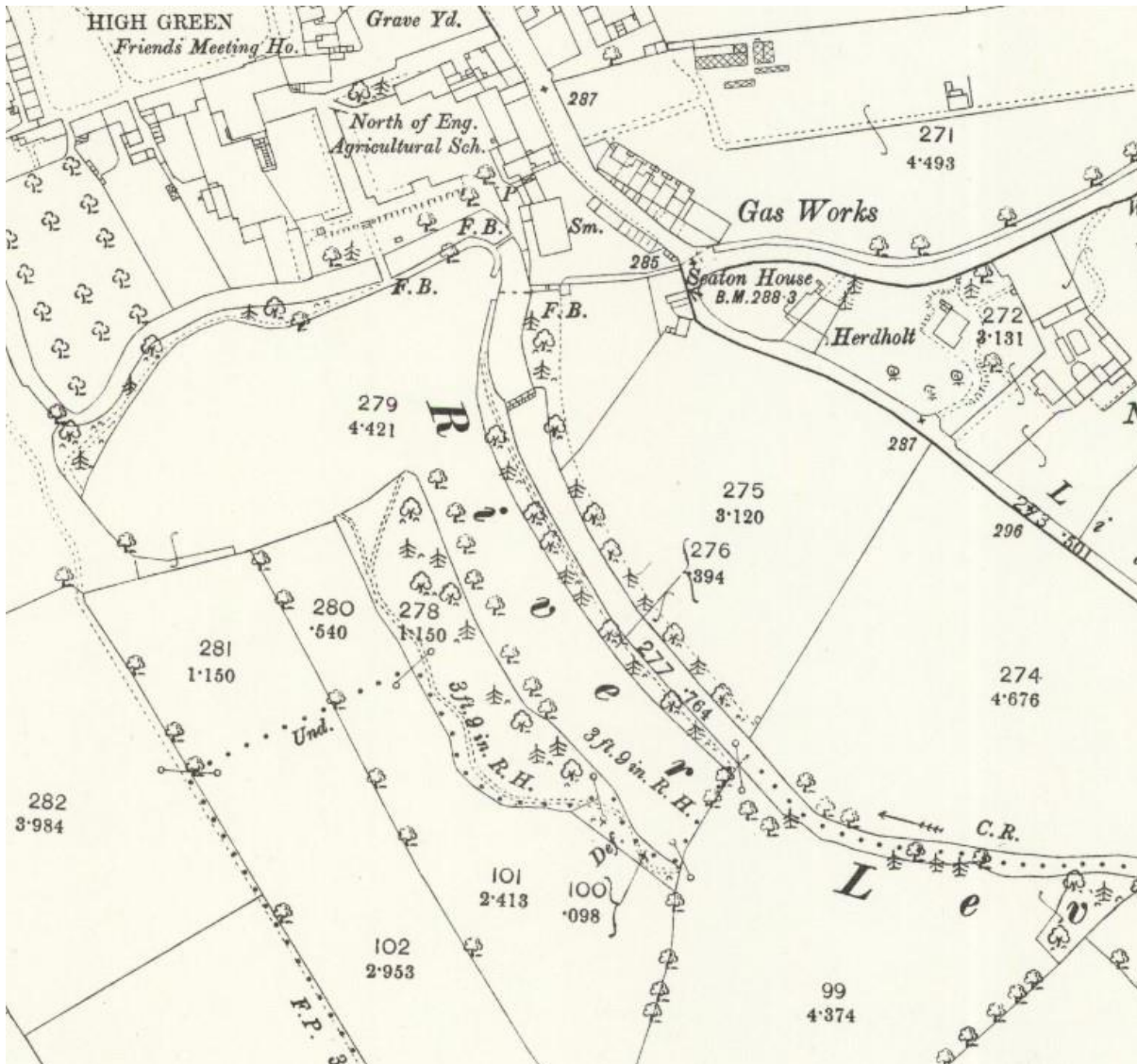


SOUTH VIEW OF AYTON SCHOOL IN 1841.

**Surveyed: 1853, Published: 1856.** The first edition Ordnance Survey map is the first detailed map we have of the area. It shows the flood bank with deciduous trees on it adjacent to the River Leven and the Dam in the same place as we see today. Half the site is marked as parkland which is shown as part of the Friends' School on the north of the river attached via a bridge (which is still in the same place today) and a formal garden. The southwest side of the site is shown as enclosed, with scattered trees and shrubs, and with a circular walkway within it suggesting that it is a decorative shrubbery for the owners of the park to walk around. Such shrubberies were popular at the time and so it may have been established by the school so that students could tend it as part of their training for later employment as gardeners for large estates.

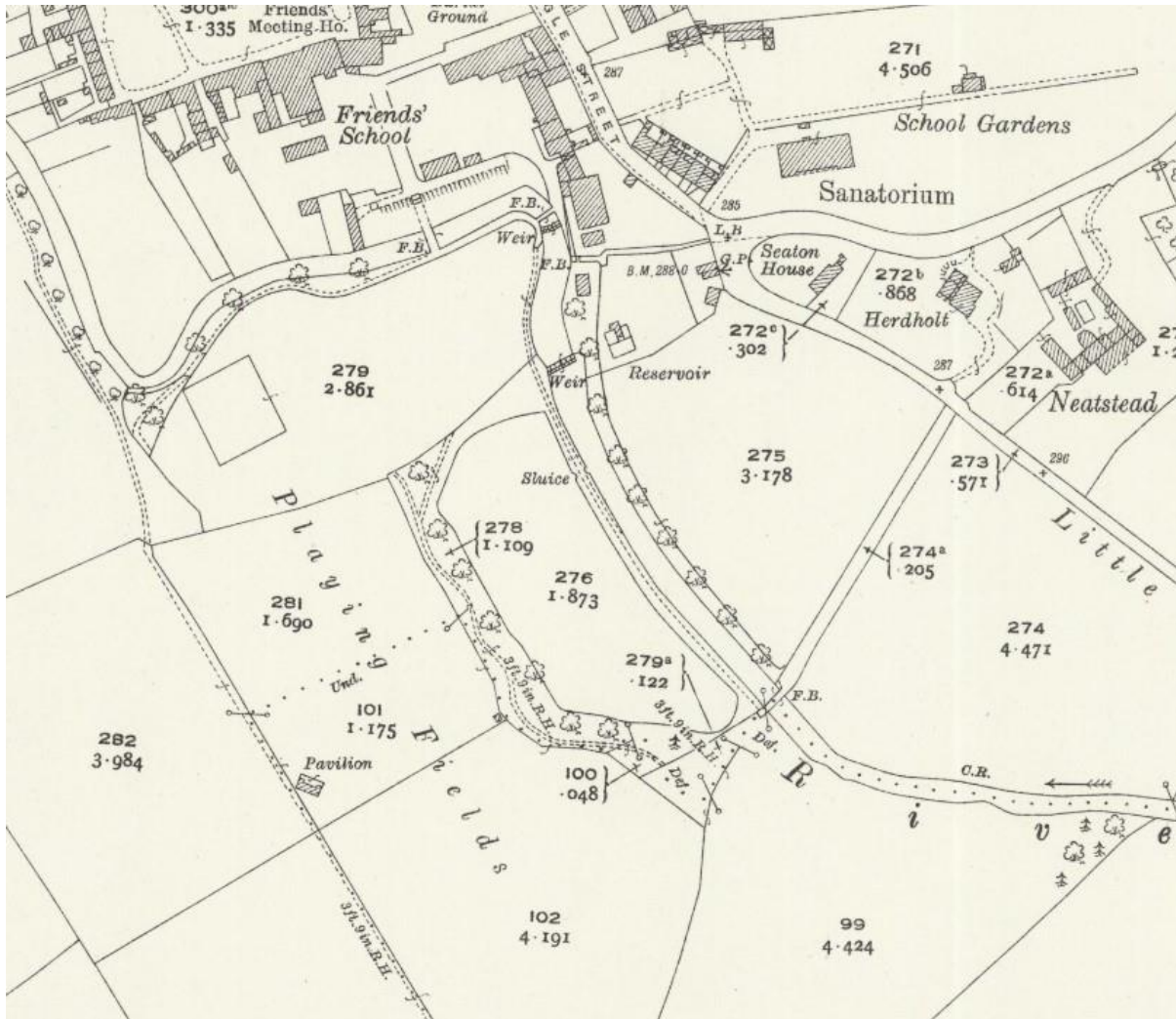


**Surveyed: 1892, Published: 1894:** The 25" Ordnance Survey Map shows a similar picture with the exception that coniferous trees are also shown to be present on site. The shrubbery area is still fenced off, the lower track is now missing with only the upper track shown and it extends now to the very south of the site. It might be worth looking to see if there any remains of that track or footpath left today. The trees shown in the 1841 engraving planted on slightly raised mounds are still present growing down the centre of the site. The fields are numbered (our site is all of 278 and 100 (which is in Little Ayton Parish) and part of 279) and the size of the field in acres given below the number.





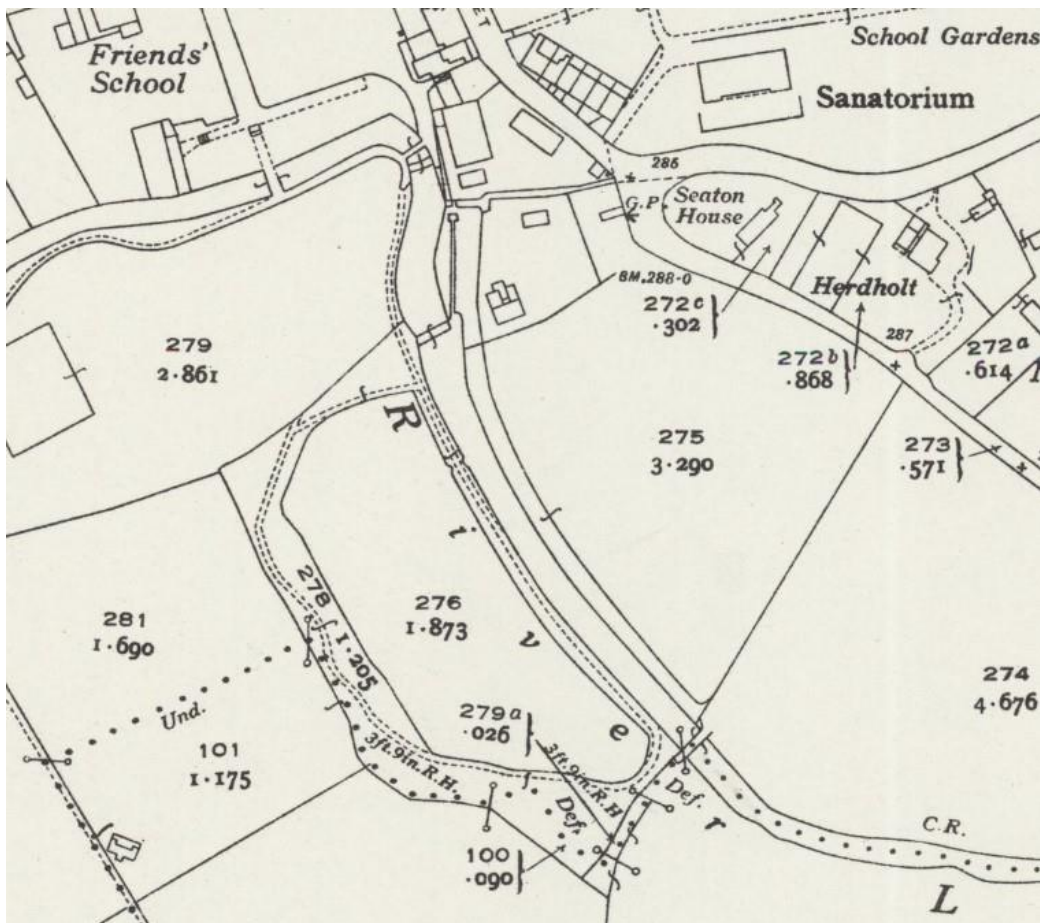
**Revised: 1927, Published: 1928:** This 25" Ordnance survey map shows a major change in the site showing a dam has been built at the north of the site to create a new lake fed by water from the River Leven via a sluice gate (marked) and that the large house is now labelled the Friends' School. There are no trees on the floodbank adjacent to the River Leven, the existing ones perhaps removed during the creation of the lake. The path to the south of the site is still present as are the deciduous trees, but the conifers are no longer shown as present except at the south end where the boundary of the site is shown as different to that in the previous map. A footbridge is shown crossing the River Leven at the boundary line between Great and Little Ayton Parishes for the first time.



This is the first map which shows the lake; I have been unable to find a date for when the lake was created.

**1930 Flood:** Another notable flood occurred on 23<sup>rd</sup> July 1930 in which Squire Bridge in Great Ayton was washed away. Photographs in the *Northeastern Daily Gazette* show flooding in Stokesley at the time.

**Revised: 1938, Published: 1946:** No trees are shown on this edition of the 25" Ordnance Survey Map though they would be present in real life. The track or footpath has been re-routed such that it does a circuit around the lake and to accommodate this the southern boundary of the site has been moved nearer to the Great and Little Ayton Parish Boundary once more.



This photograph, probably dated to the **late 1940s** shows the lake clearly in the foreground filling the area that is now meadow. The path on top of the floodbank adjacent to the River Leven shows clearly in a pale colour. Many of the trees adjacent to the playing field must have been felled when the lake was removed as they no longer show in a later 1962 aerial photograph.





A photograph on the Ayton Scholars website shows the boat on the lake being rowed by one person with a young boy as passenger and is dated **approx. 1949** [http://new.aytonoldscholars.org/wp-content/uploads/2017/06/boat\\_on\\_lake\\_1949ish.jpg](http://new.aytonoldscholars.org/wp-content/uploads/2017/06/boat_on_lake_1949ish.jpg)



“in **1951**, ‘the appearance of a boat upon the lake excited a great deal of curiosity, and when the news spread round that the boat had been given to the Boat Club, interest in rowing and sailing increased amazingly’. <sup>536</sup>” from <http://greatayton.wdfiles.com/local--files/schools/Friends-School-Great-Ayton-History-150411.pdf>

“The main attraction of **1953** was the drainage of the lake by the groundsmen, which took several years work.”<sup>200</sup>

Barbara Gibson wrote that:

‘many eels and fishes were found around the pipe which leads to the beck. Some of the eels were taken to Mr. Rodwell in the Lab. Old tree stumps have appeared and already grass and other weeds have begun to grow. The Lake is to be filled and used for games. Most of us, I think, will miss the lake, although it is to be used for our benefit’. <sup>201</sup>

Almost four years later, in **spring 1957**, ‘Mr. Reader announced, to the amusement of all, that potatoes were going to be grown in the lake, and eventually it was to be turned into a playing field’. <sup>202</sup>

The following year, **1958**, saw the lake looking ‘something like a cross between the muddy end of 3rd game football pitch and a battle field’. <sup>203</sup> Unfortunately (though perhaps to the delight of the pupils), ‘the bulldozer did succumb to the lake, and a twin “dozer” had to be delivered in order to pull it out again’. <sup>204</sup>

In the **spring of 1959**, the lake was ‘a ploughed field, on a level with Botton Field, part of which is also ploughed’. <sup>205</sup> Finally, in the autumn of that year, ‘the lake area was now thoroughly drained and available for football’, whilst ‘the banks surrounding the field were planted with daffodil bulbs’. <sup>206</sup>

“In **1958** came the felling of more old trees, but during the following year, Bridget Dunn remarked that, ‘the School appears to be getting more and more horticultural’, as along with the ploughing of the old lake, ‘we have put in some baby trees at intervals all over the grounds, to replace those that have been felled’. <sup>212</sup> “

The above quotes from <http://greatayton.wdfiles.com/local--files/schools/Friends-School-Great-Ayton-History-150411.pdf>

**side note** – which demonstrates a lot of wild roses flowering and hiping in the nearby hedgerows.

#### “Rosehips

An interesting initiative was taken up by many schools during the war and post-war years: the collection of rosehips. In Autumn edition of the ‘Beckside’ in **1944**, a contributor wrote that:

‘In answer to an appeal to schools to collect Rose Hips in the Autumn, Miss Harwood took on the organisation, and the School collected 262lbs., for which we were paid at the rate of 2d. per lb. At the end of the season hip-gatherers were able to hand over £2 5s 2d. to Friends’ Relief Service’. <sup>753</sup>

The following year:

‘we were again asked to help in the collection of rose hips, and a total of 587 lbs was realised (more than double last year’s yield)’. <sup>754</sup>

Even more were collected in **1946**, reaching the grand total of 640lbs. <sup>755</sup>”

<http://greatayton.wdfiles.com/local--files/schools/Friends-School-Great-Ayton-History-150411.pdf>

**4<sup>th</sup> October 1962** An Aerial Photo of the site [https://historicengland.org.uk/images-books/archive/collections/aerial-photos/record/RAF\\_58\\_5508\\_F22\\_0075](https://historicengland.org.uk/images-books/archive/collections/aerial-photos/record/RAF_58_5508_F22_0075) shows only small trees on the floodbank next to the river, scattered small trees on the bank opposite and the bank to the north that retained the water in the lake no longer present. This provides evidence that most of the trees present on site were planted around the 1960’s or afterwards – which would mean those poplars at the south of the site by the river have grown very big, very quickly! The conifers at the south of the site appear to be present in this photograph. The site in the 1960’s has far fewer trees round the edges than as we know it now.

Two opposite goal posts suggest a football pitch in the centre of the site and the flat rectangles of concrete present now at the south end of the site appear to show in the photograph too.

The large Oak tree to the northwest of the site shows clearly and the large Crab Apple can be seen in the centre of the westside of the site. Difficult to be sure whether the three trees in a row in the bottom west side are the current Tulip trees or not.

**2011** Building of the Flood Alleviation scheme by the Environment Agency. A bund was placed at the north end of the site and another sluice gate at the south of the site such that water could flow into the site when the River Leven levels were at a certain height and fill the floodplain meadow area thus lessening the chance of flooding through the town when the river is in spate. The grass was still mown regularly and available to be used as a football pitch but proved to be too wet to be practical.

**2019** site proposed to be managed as a hay meadow to increase diversity of native species present in the area, however as the machinery to cut and remove the grass at the end of the summer is not currently available it is likely that the area be left to grow long in the summer and cut at the end of the summer, with the cuttings left where they are cut.

#### **Notes**

LIDAR map extract © Environment Agency copyright 2020. Extract via National Library of Scotland Maps website

Ordnance Survey Map extracts **CC-BY** (NLS) 'Reproduced with the permission of the National Library of Scotland'

More information on history in Great Ayton <https://www.visitgreatayton.com/community/history-society> and <http://greatayton.wikidot.com/development>

Notes on flooding mainly in the North York Moors from here <https://www.jbatrust.org/wp-content/uploads/2020/09/Yorkshire-Rye-and-N-York-Moors.pdf>

and on Mills in Great Ayton from here <https://greatayton.wdfiles.com/local--files/mills/Great-Ayton-Mills.PDF>