THE GREAT AYTON DRAINAGE SCHEME 1898

Great Ayton was the first villages in Cleveland, and one of the earliest in rural Yorkshire, to have an underground network of sewers leading to a sewage treatment plant.

By contrast, Stokesley did not have a system of underground sewers until 1932.

Rising concern about public health

Contamination of drinking water by sewage was an increasing public health issue during the nineteenth century, particularly in London where sewage went into the River Thames and drinking water was taken out of it. Cholera epidemics were frequent, and there was no known cure for cholera, known as “King Cholera”.

In 1848 Central Board of Health was established with powers to set up local boards where the death rate was high or where a tenth of the poor law rate payers petitioned for one.

No sooner had the Board come into being, than the 1848-49 cholera epidemic claimed 53,293 deaths in England.

Within three days of the first meeting of the Central Board there were 62 petitions for local boards.

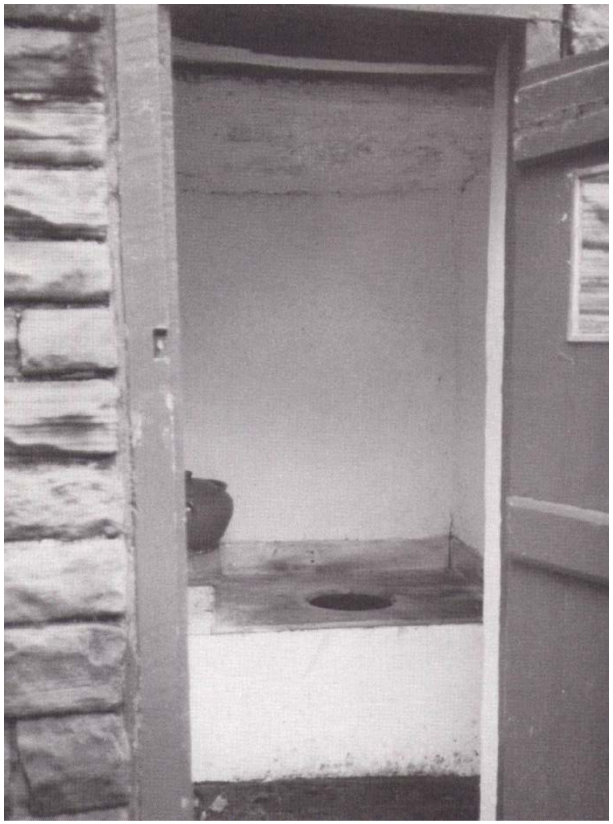
In rural areas local health administration was devolved to Rural Sanitary Authorities which came under the aegis of the Board of Guardians of the Poor Law.

Great Ayton Parochial Sanitary Committee

The Stokesley Rural Sanitary Authority was established in 1873. It covered the areas of Yarm, Stokesley, Great Ayton and other Cleveland villages. It met in the Board Room of the Union Workhouse in Stokesley.

Sanitary authorities could appoint parish boards. The Great Ayton Parochial Sanitary Committee was appointed by the Stokesley Board of Guardians on 3 June 1876

Traditional toilet arrangements



The earth closet, popular on farms and more remote locations, was no more than a hole in the ground, with a wooden seat above.

The ash-pan was commonly housed in a brick shed at the bottom of the back yard. Under the wooden seat was a metal pan into which domestic coal fire ashes were sprinkled. The contents of the ash-pan were collected by the scavengers and spread over farmers' fields as manure.

In the absence of either of the above arrangements, human waste could be collected in a bucket and disposed of as convenient, often into a stream or river.

Ash-pan emptying at the back of Romany Road

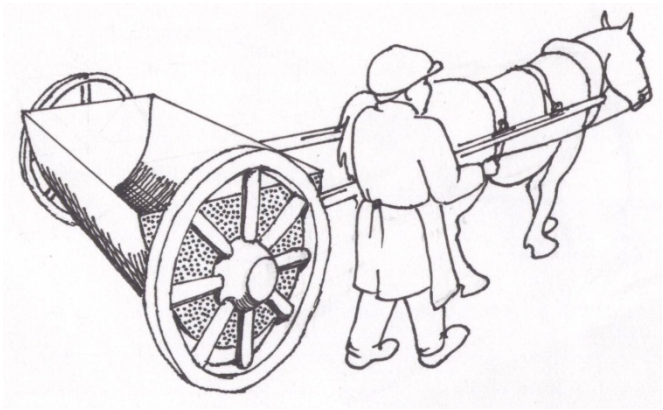
Coal hole. Note the opposite one has been bricked up

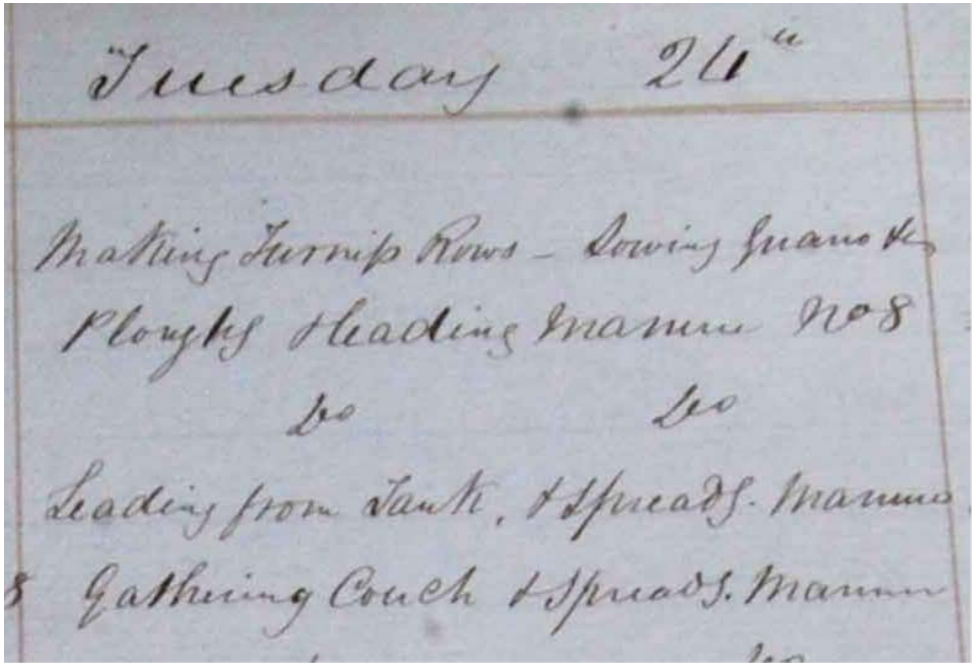
Ash-pan emptying openings, now bricked up

Scavenging - a job for the night

Possibly the only remaining ash-pan emptying opening in the village that hasn't been bricked up.

Stanley Grange Farm Record Book 1850-52





Tuesday 24th

Making Turnip Rows – Sowing guano &c
Ploughs & leading manure No.8
Do Do
Leading from Tank & **spreading manure**
Gathering Couch & **spreading manure**

A job for the women of Stokesley

"The writer of this article, too, has known Stokesley women who, doubtlessly innocently anxious to earn an honest penny, thought it no disgrace to clear out ash middens and pigsties, and even stooped so low as to bring privy refuse out in barrows to the public street, but they had the sense of decency to do the latter work early in the morning, and when few people were astir. Their husbands, who were certainly very low types of manhood, allowed them to do this without it once entering their heads that such tasks were more suited to their hardier constitutions."

The Middlesbrough News 7 September 1866

The Great Ayton Sanitary Committee

The members of the committee were not, as might be expected, drawn from the local establishment but were, in today's terminology, the middle classes. The attendance record at the meetings is shown below:

1876-1879	
John Peacock (chairman)	100%
Robert Barker	87%
James Peirson	74%
John Donaldson	61%
Jeremiah Thistlethwaite	57%
Ralph Dixon	48%
William Winn junior	43%
William A Loy	17%
John Richardson	9%

1879-1888	
Thomas Eeles (chairman 1880-88)	100%
William Hauxwell	100%
John Peacock (chairman1879-80)	85%
Ralph Dixon	80%
Robert Barker	75%
William Winn junior	75%
John Donaldson	70%
James Peirson	65%
William A Loy	35%
Jeremiah Thistlethwaite	25%

One of the least conscientious members was William Loy, the village doctor.

Why was the Great Ayton Sanitary Committee so active?

"There were assembled together in Albert Street, as vile a crew of 'roughs' as ever escaped the inside of the Deptford hulks; not the parties, we believe, who were at the ball, but the scrapings of the town, who made the streets their rendezvous, as no publicans would dare to admit these off-scourings. Daylight showed the streets and vicinity bespattered with filthy ejections from overburdened stomachs; bestial refuse met the eye at every turn, bearing distinct testimony to the dregs of humanity which had been thereabouts."

Middlesbrough Weekly News and Cleveland Advertiser New Year's Day 1859

With the rapid expansion and industrialisation of the village, there must have been fears that Great Ayton could become a miniature version of Middlesbrough.

Another reason for the Sanitary Committee's concern was the state of the River Leven. Inevitably, much domestic waste found its way into the river. Because most of the water flow was diverted down the mill race to the two mills by Low Green, there was little flow through the main water course, as can be seen above. On Sundays, the mill sluice-gate was closed and the river flowing through the village was flushed out!

The work of the Parochial Sanitary Committee

2 February 1877 minutes

"Complaint having been made by Mr Mease, Sanitary Inspector, that Thomas Eaton has opened a communication from the main sewer in California Road to an old brickpond at the back of his cottages by means of open pipes no provision being made to prevent the passage of sludge and other solid matters into and liable to accumulate in the main sewer.

Resolved that notice be given him that he forthwith discontinue the said connection with the main sewer."

The work of the Parochial Sanitary Committee

22 June 1877 minutes

"Resolved that this Committee considering the drains in Bridge Street and the lower part of the village insufficient for the present requirements recommend that a more efficient system drainage be now made.

Resolved that about twenty yards of drain be made in California from the main sewer near Mary Ann Taylor's and continued westward from that point for the distance required."

The work of the Parochial Sanitary Committee

4 July 1884 minutes

"As regards the Friends Almshouses, we find that each House is provided with an ash-pit and water-closet, said WC emptying itself into a small Rivulet passing down the Back Row finally emptying itself into the principal beck passing through the village.

The committee recommend that Mr Hodgkin be written too asking him to make provision so as to prevent the excrement etc. from the WC passing into the beforementioned Rivulet."

Jonathan Hodgkin, at Cleveland Lodge, had fitted WCs into the Pease Almshouses, which presumably had a piped water supply from the private system supplying Cleveland Lodge and the Quaker School. Unfortunately there was nowhere for the WC discharge, other than the notorious Skitter Beck.

The campaign for a drainage scheme begins

31 May 1881 minutes

"Resolved: That it is desirable that a survey of both California and the whole village be made with a view to the drainage of the whole village so as to keep the sewage from emptying into the open beck and to ascertain what may be the probable cost and that Mr Henry William Dixon be asked to make the said survey and estimate."

There followed all manner of problems:

An application for a government grant of £700 was returned with a request to improve the proposed scheme.

The landowner refused to sell the land for the treatment plant.

Ten years later there had been no progress and villagers sent a petition to London.

13 years later, 1894, there was still no scheme

The landowner refused to give way until a competent sanitary engineer was appointed.

A competent engineer was appointed, but the Sanitary Committee rejected his plans!

They decided to stage a national competition with a prize of 25 guineas.

Six entries were received, but the committee could not decide on the best plan.

They appointed another engineer to assist them.

Eventually they accept a modified version of the plans by Mr Harry Taylor of Newburn-on-Tyne, at an estimated cost £2990. His circular inspection and ventilation covers can still be seen around the village.

Compulsory purchase was needed to acquire the land For the treatment plant off the Stokesley Road.

Construction began in 1898.

Parish Council Minutes

The Great Ayton Parish Council was formed in 1894.

In 1896 they wrote to the Chairman of the North Eastern Railway asking for:

“Increased sanitary appliances, one WC for males and one for females being quite inadequate.” (Today there are no toilets at the station)

And

“A siding and convenience for unloading town manure at a greater distance from the passenger station.” (This was to import additional domestic ash-pan waste from Middlesbrough for spreading on the fields. It was constructed at Lineside Cottage.)

The original building from 1898 still stands on the site

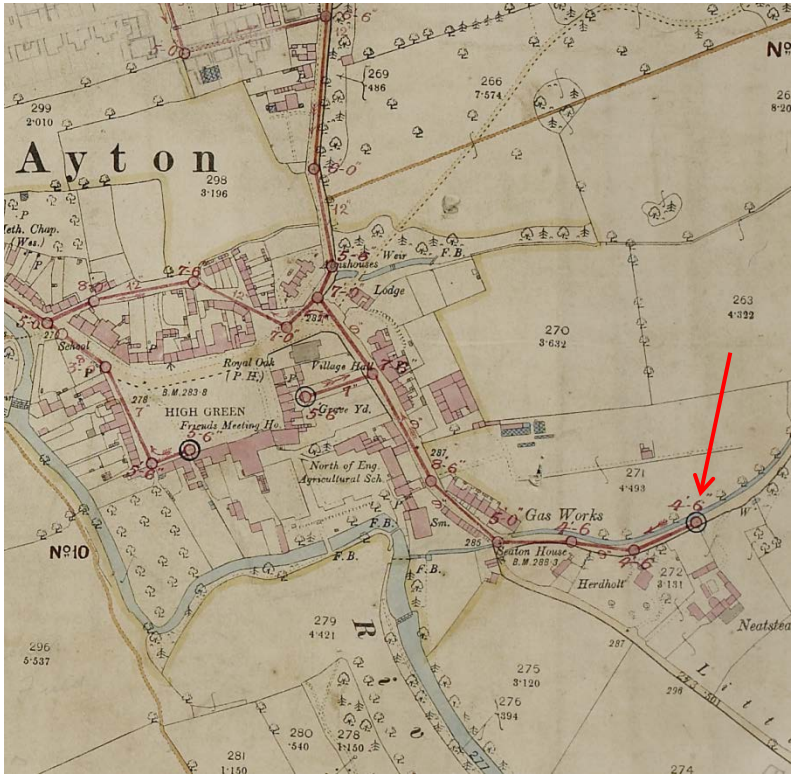
GREAT AYTON SEWERAGE WORKS
1898

R. H. SIMPSON	**CHAIRMAN OF SEWERAGE COMMITTEE**
W. RICHARDSON	**CLERK TO COUNCIL**
HARRY W. TAYLOR A.M.I.C.E.	**ENGINEER (NEWCASTLE UPON TYNE)**
W. McILOUHAM	**RESIDENT ENGINEER**
E. CRUDDAS & SON	**CONTRACTORS GUISBOROUGH**

Ventilation stack on Guisborough Road

Harry Taylor's scheme called for ventilation stacks at the extreme ends of each leg of the system. The stack on the Guisborough Road can be seen in an old postcard.

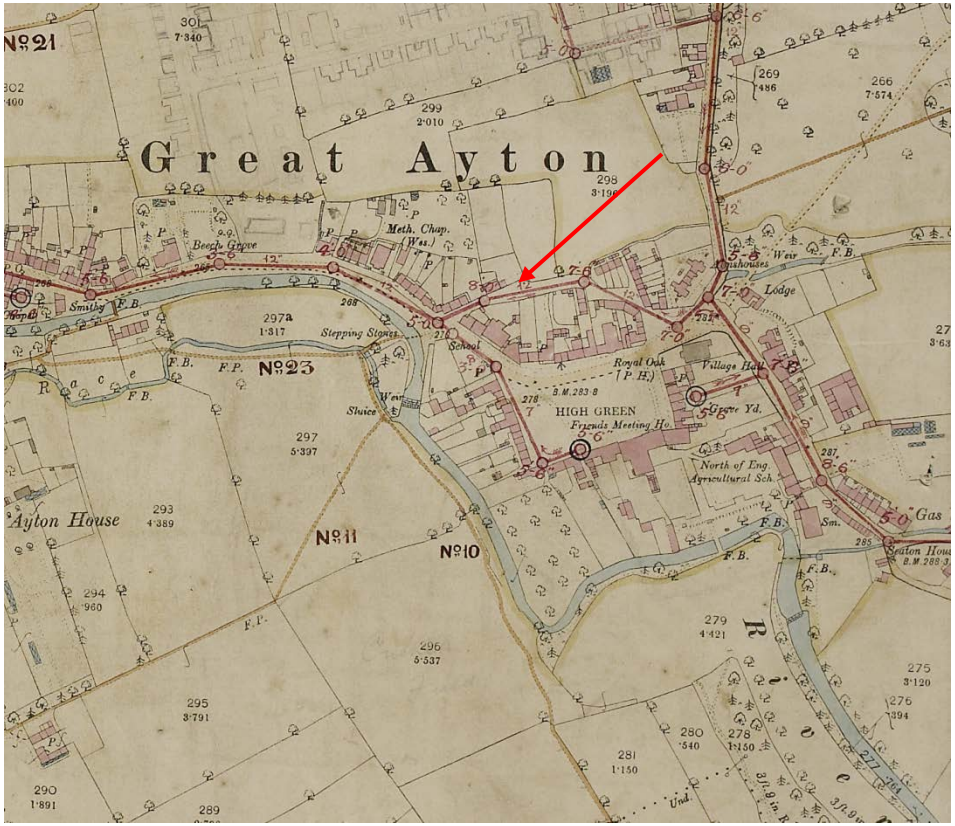
Ventilation stack on Station Road



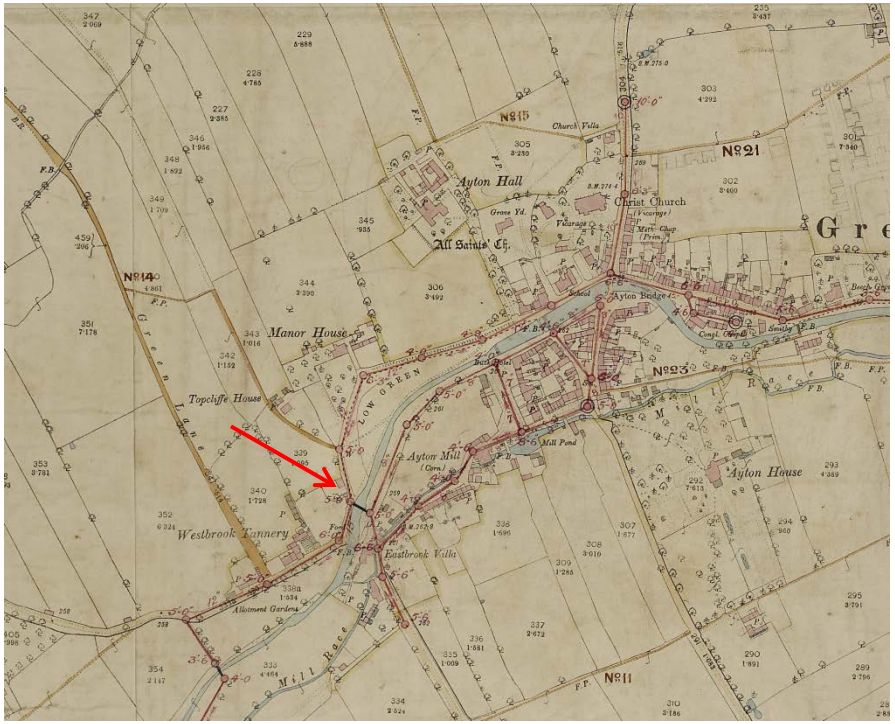
The ventilation stack at the bottom of Station Road has been cut off.

Inspection cover in Arthur Street

Inspection cover above the culverted Skitterbeck



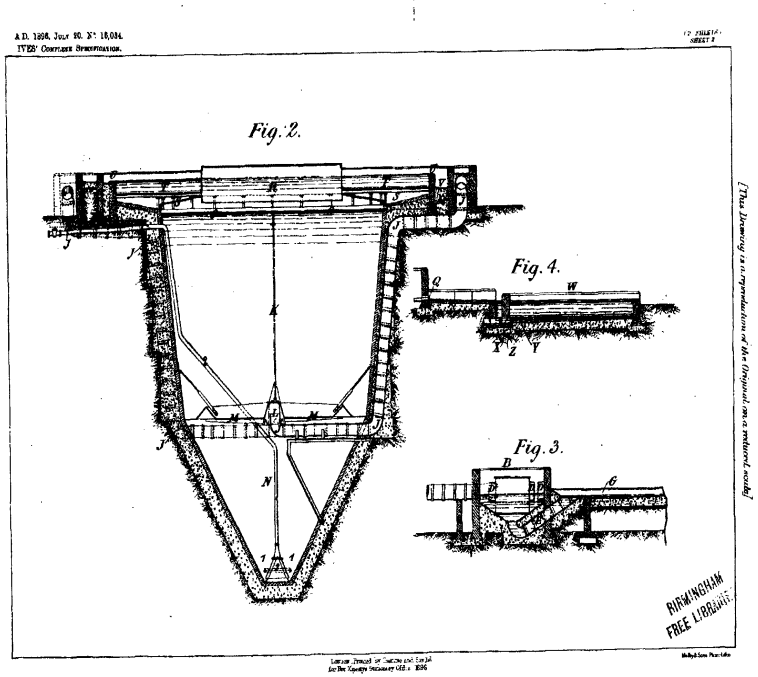
Drainage Scheme – Low Green

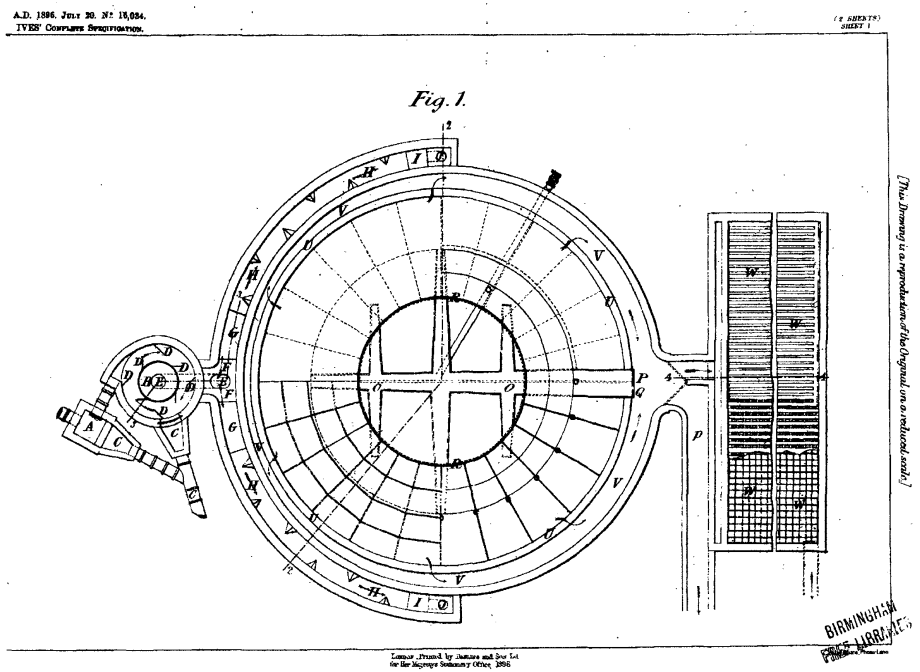


Main sewer crossing the River Leven to Stokesley

The current crossing of the River Leven is a 1903 replacement for the original pipe, which was swept away in floods. The brick abutment for the original pipe can be seen on the left. Considering the small diameter of the pipe, it is not surprising that the drainage system cannot cope in periods of heavy rainfall.

Sewage treatment plant





The sewage treatment works featured Ives Patent process, only patented two years earlier in 1896. So, in addition to having one of the first sewer systems, Great Ayton had a leading-edge treatment plant.

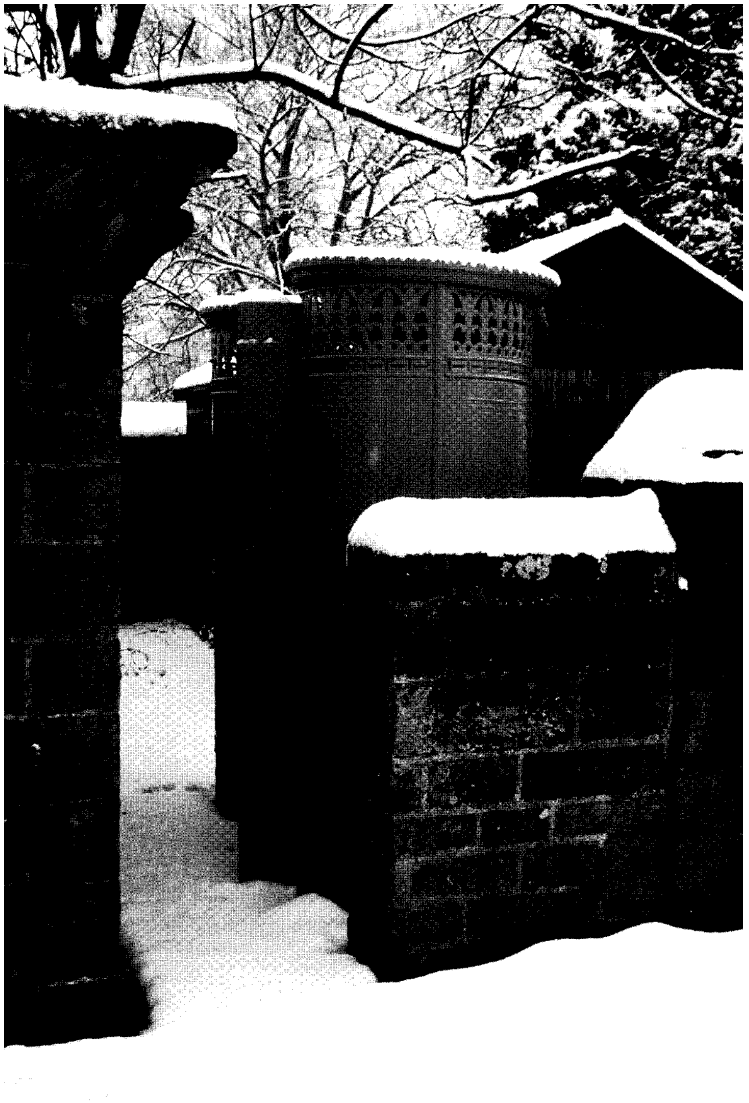
Urinals

The newly formed Parish Council raised the question of urinals on 7 July 1896.

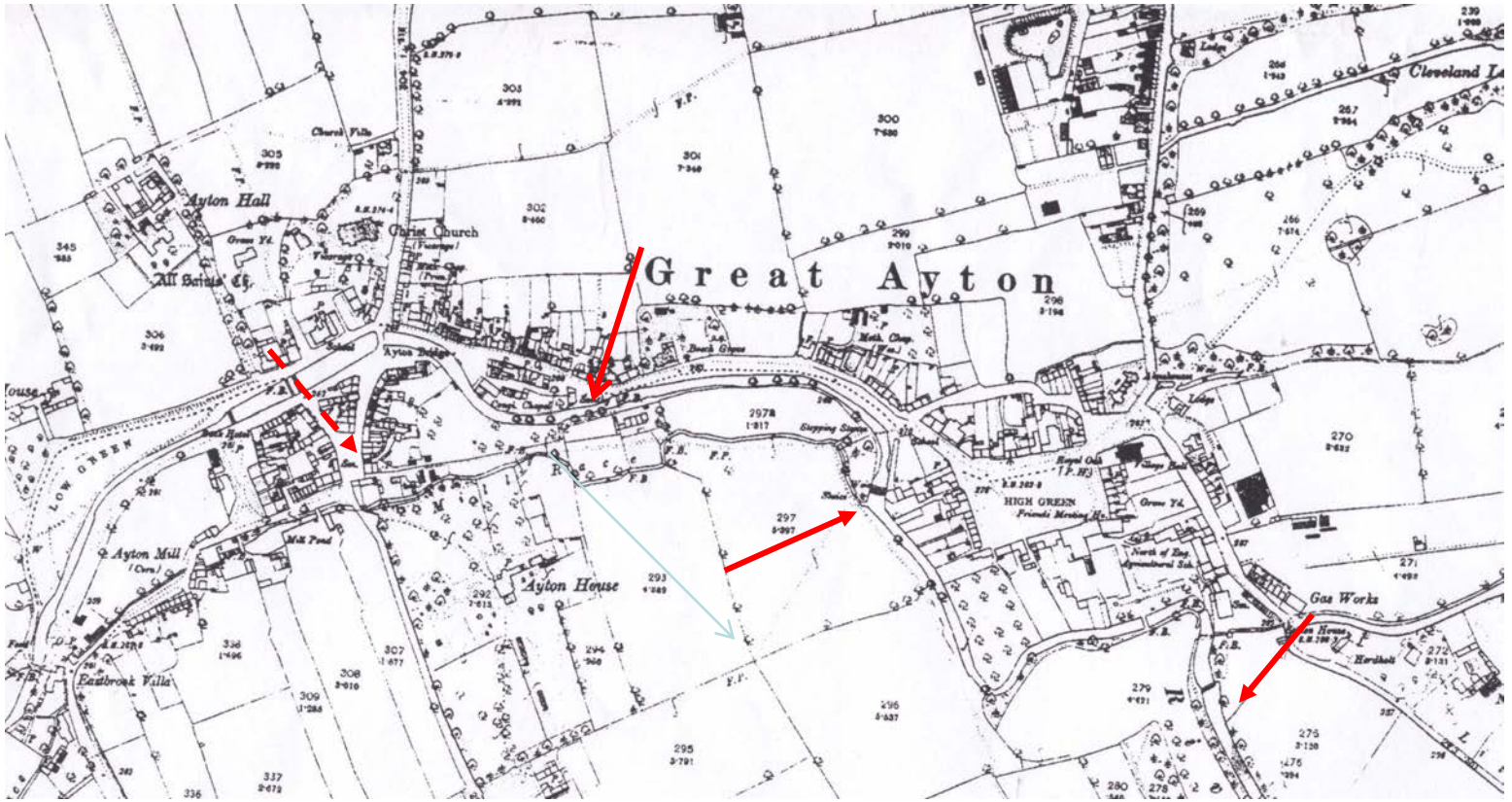
The Parish Council ask the Sanitary Committee about "… the desirability of placing urinals in the township whilst the present drainage operations are going on. "

They decided to purchase three urinals six years later. Each cost £13.16.0 delivered to Ayton Station.

There was a great debate over where to site them.

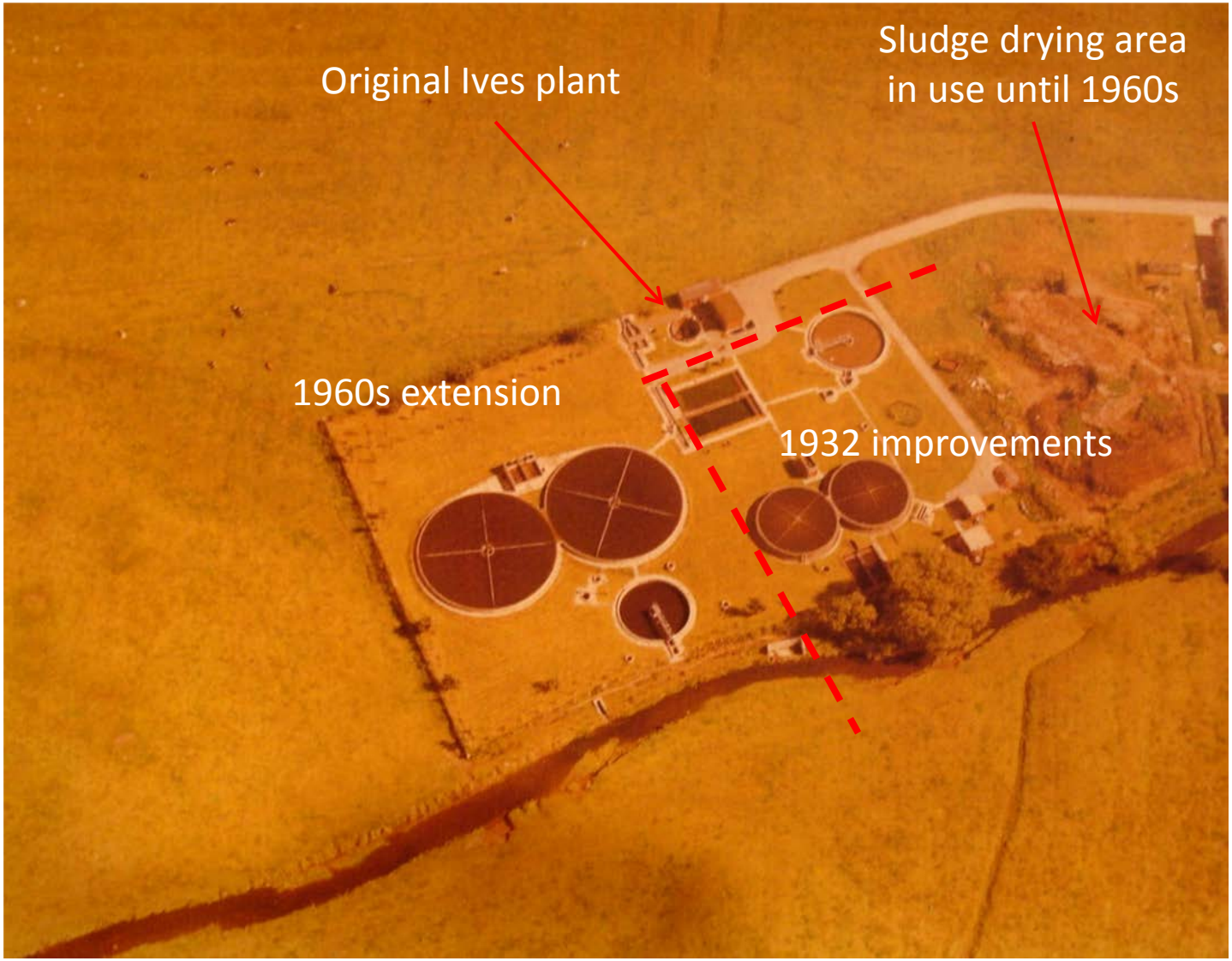


Location of urinals



Waynman Dixon of Ayton House objected to a urinal by the Stone Bridge (dotted arrow) and so this one was re-sited opposite the entrance to the present Beech Close. The only urinal remaining today, originally at the bottom of Station Road, has been repositioned in Waterfall Park. Sadly, it is not functional.

Later extensions to the sewage treatment site



Not surprisingly, it was increasingly difficult for the 1898 sewers to carry the greater quantity of effluent as the village expanded. Problems arose at times of heavy rainfall, with inspection covers lifting and discharging foul water onto the streets.

A consultant's report in 1957 recommended changes to cope with current problems and projected increase in housing. This report was rejected since the local authority wouldn't pay for something that may be required in the future. But one storm overflow was installed by Grange Mill in the 1960s. At the same time, some of the original earthenware sewers were replaced with larger diameter concrete pipes