Whinstone Mining
(Extracts from chapters of the book "Great Ayton – A History of the Village by Dan O'Sullivan")

For about 31 miles between Blea Hill Ridge near Robin Hoods Bay, and Eaglescliffe, runs a straight, narrow band of hard rock called the Cleveland Dyke. It cuts through the surrounding sedimentary layers as a nearly vertical wall, and **it** is believed to have forced its way up from the interior of the earth about 58 million years ago. Near Great Ayton the dyke protrudes to form Cliff Ridge and Long Barrow, the latter having given its name to the wapentake of Langbaurgh. The rock is usually called whinstone, and its presence near Ayton gave rise to an important local industry. Near the village the stone is particularly accessible as the dyke is about 80 feet across at the surface.

When the local quarrying of whinstone first started is not known but it was well underway by the late eighteenth century. In his diary for 25th June, 1784, Ralph Jackson of Normanby reported:

> *Since I became Surveyor of the High ways in this Township, to wit in the year1770, I have caused causeways to be paved (with flint-stones from Langbaugh Rig in the Township of Nunthorpe, in all the Lanes in it.*

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Five years earlier he was already utilising the quarries:

> *22 April. 1779. Brother Wilson and I walked to Mat. Masterman's and other quarries to procure flint stones for the Highways of Eston.*

A skilled part of the whinstone operations was shaping the rock into setts, which were cubes of stone, of about four to five inches aside. These were used as cobbles, and may still be seen today on some of the older yards and pathways round the village. Whinstone is easy to identify, being dark bluish, and much heavier, than other rocks such as sandstone. To shape the setts workmen had to knap it, as with flint, which involved giving a series of comparatively mild, glancing blows. Hitting it too hard could easily split it in the wrong place. The sheer weight of whinstone ensured that this remained a very local industry until the coming of the railway (see next chapter).

After the Railway

The railway had an immediate effect on the whinstone industry. The OS map surveyed in 1853 shows several whinstone quarries in the neighbourhood, but all were served by road and must have been very small. However, in 1868 Leeds Corporation, which was searching for a supply of durable stone for the city's roads, was delighted to discover the Cliff Rigg quarries just north of the village. From here the stone could easily be brought by narrow-gauge rail to a siding beside the main line, and thence transported the 67 miles to Leeds.

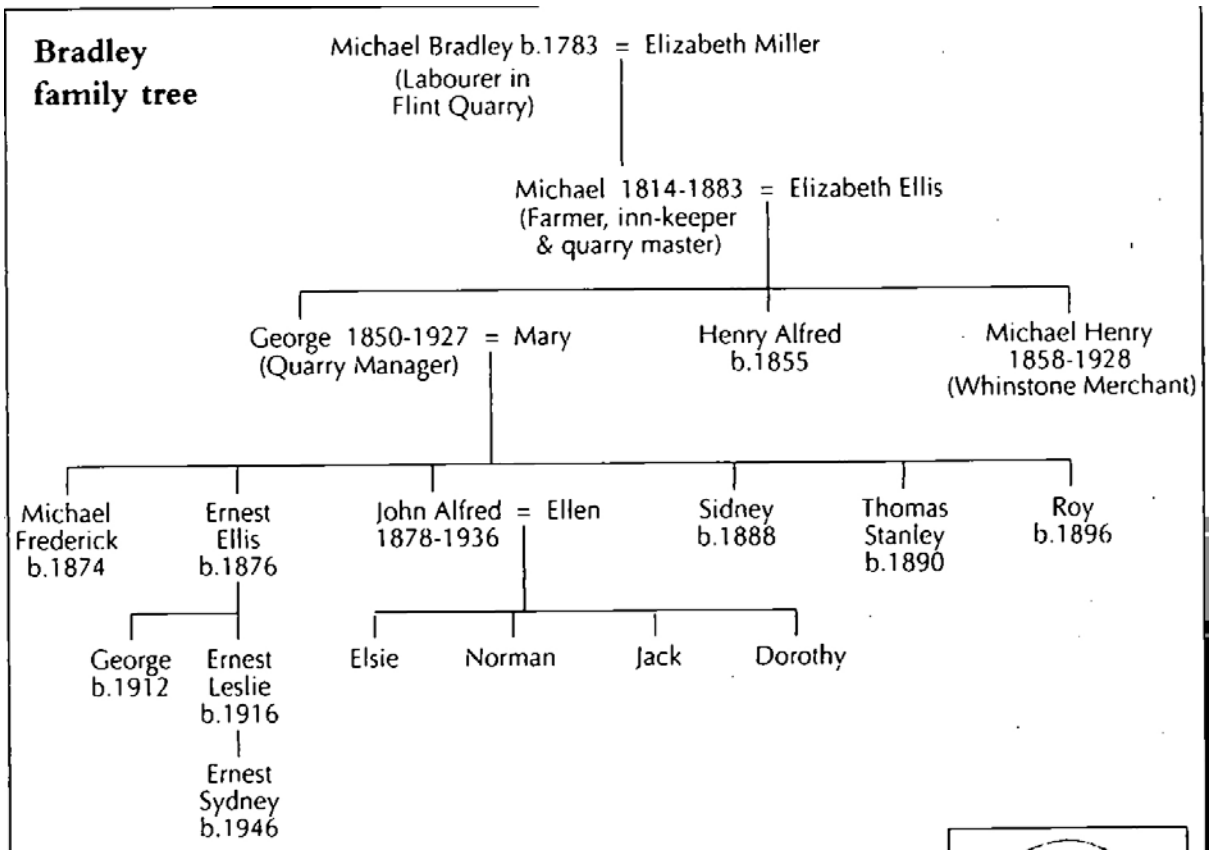
For the next fifteen years Leeds Corporation operated three drift mines into the side of Cliff Rigg, but in 1883 they leased their plant and mines to William Winn, from whom they contracted to purchase 8,000 tons of *good, machine-broken stone* per annum, at 4/3d. per ton, to be loaded into the Corporation's standard-gauge wagons on the main line at Ayton. By this time the old, square setts were no longer in demand — a crusher on the site broke up the whinstone into small fragments for transportation'

These two photographs give some idea how busy Ayton station could be during the early years of the century.

William Winn had already been operating quarries on Cliff Rigg and also in Slacks Wood to the east when he took over the Leeds Corporation royalty. In 1881 he was living at Cliff House, and in the census for that year he is described as *quarry-master employing 80 men.* His father, also William, had been a *labourer in a flint quarry* according to the 1851 census (flint being an alternative name for whinstone). The family had originally come from Newton. In about 1913 the Winns' operations seem to have been taken over by the Gribdale Mining Company, who also operated a quarry at Gribdale between 1891 and l926. In the late 1970s yet another company was removing tons of material from Cliff to be crushed for road surfacing, much in the face of local opposition.The result of all this extraction of stone over the past century can easily be seen today - Cliff Rigg now constitutes the most visible landmark for miles, a great gash through the landscape, good for motor-cycle scrambling but not much use for anything else.

Apart from the Winns, the other leading quarry-managers were the Bradleys, who operated Langbaurgh, on the west side of the Ayton-Guisborough road. Like William Winn senior, Michael Bradley senior, who also came from Newton, features in the 1851 census as a *labourer in a flint quarry.* This Michael Bradley was the ancestor of a very extensive family, many of whom remained in Ayton and took part in the management of Langbaurgh quarry and mine. At the end of the century the manager at Langbaurgh was George Bradley, the grandson of Michael senior, and he was succeeded by three of his sons. The following family tree is derived from information supplied by Mrs Elsie Little, the daughter of John Alfred, one of these three brothers.

Bradley family tree



In the late nineteenth century the whinstone was removed from Langbaurgh via a narrow gauge railway to the north of the ridge which connected with the main line near where **it** now passes under the Ayton-Guisborough road. A locomotive named Clara - engines were always feminine - worked this service. It seems that Clara was scrapped in 1910. After this date the stone had to be manhandled in small trucks along a tramway within the mine, which ran the length of the ridge (i.e. from the present caravan site to the Ayton-Guisborough road). The trucks were then hauled up an incline by a stationary steam engine (later, by electric power), and to a crusher, screens and weighbridge at the surface, where the stone was broken, graded, and dispatched by rail or lorry. An account by Norman Bradley, one of the last generation of Bradleys to operate Langbaurgh - he joined the payroll in 1934 - reveals something of the conditions of work in this most strenuous of industries:

Mr George Bradley of Newton Grange. Managing Director of Bradley Bros. Ltd, quarry owners.

The men worked a 50-hour week, with a shift of 7-12.00 then 12.30-5.00, Monday to Friday with some Saturday work. There was no night shift. The work was hard, especially in the earlier days when the picks and hammers were the order of the day. Blasting must have made the job a little easier. Even in those days the men wore helmets although they were of poor strength, being made of a compressed cardboard type of material. One, Sammy Simpson, was killed by a relatively small piece of chipping which hit him on the skull whilst he was chipping away at the roof of the tunnel, an exercise carried out to maintain the safety factor of the tunnel roof Accidents which occurred involved mainly broken legs and the man involved was carried out by hand stretcher. When a St. Johns Ambulance unit was set up in Ayton my brother Jack joined and learned the useful aspects of first aid.

The breaks that the men had were not paid for in their wages and prior to the Parliamentary Act which endorsed a paid break for working men they had no break until lunch-time. Wages in 1936 were 1/- per hour for the 50-hour week. Sixpence was knocked off for the doctor, who at the time was a Dr. Murray. North Ormesby hospital was used for the population at this time.

The men walked or biked to work. Their 'bait' consisted of cheese sandwiches and cold tea which was carried in a billie can, somewhat like the milk measuring cans of those days. Prior to this, cheese was a luxury and older men would remember the days when turnip sandwiches were the thing. Various ribaldries grew up around these turnip sandwiches, they became transported into white cheese or even bacon ones through the imagination of men who tried to brighten their day. Whilst electricity came to the quarry in 1930 and the pump was transferred to electrical power from the steam boilers used previously, the men were still using candle power to operate from down in the tunnels. This situation prevailed right up to the end of the quarry's life

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Bradleys' Langbaurgh quarries continued after the second world war, but on a much reduced basis. Stafford Ripley remembers working down the mine with his dad in the 1960s, when there were only half a dozen miners altogether. In the 1970s Langbaurgh Council acquired the land on a compulsory purchase order, and for several years the mines and quarries were used for refuse disposal. At the time of writing the refuse tip has long been closed and it is proposed to make a public footpath along the ridge.

The workforce at Bradley's quarry (top) and at Winn's (above).