

[Note: This is an extract from the general visitation of the Greenwich Hospital's northern estate in 1774, undertaken by James Stuart and Thomas Hicks, directors of the Hospital.]

4 Aug 1774 James Stuart

Thursday 4th Aug.t

Having settled every thing at Alston we set out this morning for Hexham and passing by several places where lead mines are working, & Trials making at a considerable expence, by different adventurers, we came to Long Cross Pool the boundary of the manor on this side & were shewn the part which was in dispute with Mr.Ord; Here we parted with Mr. Joseph Hilton Junr who attended us every day during our stay in Alston Moor. He is Clk of the Deliveries of Ore & was appointed to that office in consequence of the Hospital's undertaking to smelt its own dues; his duty is to see that the Hospital's ore is properly weighed to the Carriers & to keep an account of the quantity delivered to each of them & from what mine. He is also Assistant to his Father who is Moormaster, for both which duties he is allowed £40 p. ann vizt £30 from the Hospital £10 from his Father, whose salary as Moormaster was increased a few years ago (upon that condition) from £40 to £50 p. Ann. We cannot help expressing the satisfaction we received from this young man, having found him a very intelligent, well behaved person and, as far as we could judge, extremely well qualified for the employments he is in.

The Moor Master's Duty is to survey the Mines, to see that 1/5 part of all the clean wash'd Ore is delivered for the use of the Lords of the Manor & safely kept apart by the tenants til otherwise disposed of; this the tenants are by their leases, obliged for 12 months nit no longer.

The time we spent in Alston Moor, which is supposed to contain not less than 40000 acres & to be near 70 miles round the Boundary which was rode by the Receivers about 12 years ago, afforded us great satisfaction when we considered it not only as producing great Riches to the Hospital & private adventurers, but giving bread to near 3000 people, men women & children employed in various occupations in & about the mines & to numbers of others one way or other depending upon them. The Hospital's dues have for some years past amounted to upwards of 3000 Bings of ore one year with another, and produced clear of all charges, between 8 & 9000 p ann. After quitting this source of industry & Wealth we continued our journey to Hexham, and in our way visited

Gregshield Colliery at High Stublick (part of Langley South Common) which is at present under Lease to Christopher Bell, the Hospital's Bailiff for Langley Barony, for 21 yrs expiring in 1781 at £18 p ann. This colliery which is now working in an indisputed part of the above Common is at a very small distance from the Hospital's new erected smelting Mill & Refinery at Langley & consequently very conveniently

situated for supplying it with coals & Cinders, but it is much to be feared that the Seam will be exhausted in a few years, the ore carriers horses, after delivering their Loads of ore at the Mill, carrying back great quantities of Coals with them into Alston Moor. However should this happen the Mill will not be essentially hurt by it, as, in consequence of Trials made about 12 months ago, other Seams have been found in the neighbourhood.

[Added in the margin in a different ink:] Since 1775 this Colliery has been new won or laid dry by a level & <that> Coals are used for the consumption of Langley & Blagill Mills for many years to come, also a considerable increase of water obtained for the working of those mills. [The 'Blagill' mill adjacent to Langley was commenced in about 1785, suggesting that this comments was added no earlier than that date.]

The Ore Carriers' Horses abovementioned bring back each of them $\frac{1}{4}$ of a Bing of 2 Pokes of 1 cwt each, for which their owners are paid from 5s to 6s p Bing according to the distance. One man generally attends 15 of them.

From the above Colliery we went down to the Lead Mill & took a cursory view thereof intending to take a more particular one the first convenient opportunity. The buildings appeared to be in good order & the smelters at work in their different Branches. We then went on to Hexham where we lay, tho very uncomfortably this night, the town being in great uproar & confusion owing to a Canvas carrying on by the different Candidates for the County of Northumberland.

17 Aug 1774 James Stuart

Wednesday 17th August.

This being a wet day and unfit for the prosecution of our Business in the Fields, we made up the opportunity to revisit

Langley Lead Mill & c and accordingly went over that place. This mill with the several conveniences and machinery belonging to it was finished about seven years ago, under the directions of the present receivers upon an excellent plan, as it appears to us, and in a handsome substantial manner. The smelting house contains four hearths, three for ore and one for slags. The refinery which is a building detached at a small distance, contains a refining and reducing furnace. Besides which there is an office for the Mill Agent, a smith's shop, and ample provisions of peat houses, Bing steads for holding the various ores etc.

The principal supply of water for the use of this Mill is from the level of Gregshield colliery, about $\frac{1}{4}$ of a mile off - which has as we have been informed this advantage that it has not yet been known to freeze (even in the hardest of frosts) before it gets to the mill or even for, some space afterwards; whereas the contrary happens at other lead

mills in this part of the country which are frequently stopped working in the winter for a considerable time on that account.

We saw the different operations of smelting both the ore and the slag, refining and reducing the litharge into lead again, and making what they call the test, which is an oblong shallow vessel, composed of a certain proportion of bone and fern ashes in which the lead is run in order to its being refined. Ashes are used on account of their unvitricifiable quality resisting in a wonderful manner the extreme heat of the reverberatory furnace.

A cake of pure silver was taken off whilst we were present, weighing more than 1,300 ounces, being the largest by upwards of one sixth part of any that had been produced at this mill before. It was the produce of 2,667 pigs of lead, whose weight was 2,671 cwt. 2 grs. 15 lbs.

These pigs had by a previous operation of the same kind been so far refined as to be brought down to 22 pigs only. The produce of silver upon this occasion was about 11 ozs. for every fodder of lead, the loss of which latter by refining and reducing is reckoned upon an average about one fifth part.

The workmen who are employed in smelting etc. are paid by weight as under: -

	£.	s.	d.
Smelters of refinable ore	6.	0	per fodder
Smelters of slags	12.	0	per fodder
Smelters of litharge, black slags, and test bottom lead	1.	8.	0 per fodder
Persons for stamping and washing black slags	7.	0.	0 per fodder
Persons smelting lead from black slags	3.	0	per fodder
Refiners	2.	10	
Reducers	1.	6	
Reducers for weighing		2	

Two smelters at the one hearth will smelt about 17 pigs of 1 cwt. each and sometimes more if the ore is free, in; about 12 hours. Three refiners can refine about three foddors, which is as much as one test can conveniently hold, in about 22 hours; but then nearly one third part of that time is taken up to prepare for working by heating the furnace and gently drying the test. Three reducers can reduce about two and one third foddors in twelve hours. As to what may be earned at the slag hearth, by stamping and washing the black slags, smelting litharge slags, etc., we were not able to learn with any precision, 'but as the prices allowed per fodder are so much more than the others it must necessarily follow that the operations of producing the same quantity of lead must be proportionably more tedious.

The Mill Agents' house & the four others for the workmen which adjoin to it are in very good condition being all built of stone & covered with heath. Some land, containing 60a 3r 17p has been taken off from that part of Langley Castle farm, which is in the occupation of Thomas Brown, for the use of the above agent & workmen besides 21a 2r 31p more spoiled by the smoke from the Mil & Refinery & taken up with the buildings & necessary works. Brown is allowed £26 p. Ann for the whole – which is made up in the following manner

	£	s	d
Paid by the Hospital p. ann	7.	0.	0
Agent	6.	2.	6
Workmen	13.	7.	0
	26.	9.	6

The surplus of 9s6d is applied towards paying 5 p cent upon the money expended in making fences &c

The above mentioned 60a 3r 17p are divided into small Farms which are improving and the young quick fences are in a thriving condition.