Henry III (Posthumous), Class 7 Pennies from the London Mint

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This is the revised version of the first of three planned articles on class 7 pennies from the London mint and deals with an estimate of the number of coins and dies from the London moneyers Reginald de Cantuaria (Renaud) and Phelip de Cambio; later articles will document some observed varieties for each of these moneyers in turn. Typical coins are illustrated on page 5. Useful feedback from Mark Shearman on the original article has allowed me to revise some of my earlier assumptions, and my latest thinking on this subject is summarised below.

The economic background to the period is discussed in an interesting article by Mavis Mate[1]; she highlights a number of economic challenges of the late 13th and early 14th centuries, including the general shortage of coins which was inadequate to serve the needs of an expanding economy and an increasing population.

Difficulties in estimating the number of coins and dies for each of the London moneyers arise primarily because we do not have an exact record of the commencement date for class 7 and also because we do not know the production rate for each moneyer. We do know that Phelip took over the mint after the death of Renaud, and that he was in place producing class 7 pennies for only about six months from May 18th 1278 to November of that year.

In terms of hard facts, we have some mint production data from the 1270s, shown below, and we know when Phelip started and ended production, however we do not know when his predecessor, Renaud, first commenced minting class 7. Also note that in looking through dealers lists and auction catalogues one gets an impression of the relative

Production data for the London mint.			
Period	Approx. Months	Total £	Average £/mo.
Nov. 1273 - June 1274	6	£10,315	£1,719
June 1274 - June 1275	12	£7,960	£663
June 1275 - Nov 1278	41	£60,663	£1,480

scarcity of surviving London mint coins, and the author has the impression that Phelip coins are at least two to three times more abundant than those of Renaud. Lawrence[2], writing in the BNJ between 1912 and 1915, noted only one reading for a coin of Renaud and five for Phillip – implying the existence of more Phelip dies than those of Renaud. If we consider that the ratio of Phelip to Renaud coins known today is indicative of past production we can use that information to make an estimate of when class 7 production commenced.

We can make a reasonable estimate of the rate at which coins could be minted from a set of dies, and it is useful to consider what the maximum output of a mint could be per set of dies. Normally only one set of dies was allowed to each moneyer at a time, and, if a mint was operating with a single moneyer as in the case of London in the 1270s, then the calculation shown below may give us a theoretical maximum output case.

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[1] Mavis Mate, 'Monetary Policies in England, 1272-1307', BNJ 41 (1972) pp 34-79
[2] L. A. Lawrence, 'The Long Cross coinage of Henry III and Edward I', 9 (1912), 145-79, pl.; 10(1913), 69-93; 11 (1915), 101-19

In this case the sustained production rate of 15 coins per minute would require frequent changes of "hammermen" and would need an assistant to place the blanks between hammer blows. The calculation also assumes that the mint was able to operate around the clock; if it was only open for, say, 12

15	coins per minute.
900	coins/hr
21,600	coins/day - assuming three 8 hour shifts
26	days prod'n/month - Sundays off
561,600	pennies/month
2,340	£/mo

hours per day then perhaps the moneyer was allowed the simultaneous use of two sets of dies with two strikers rather than one.

The London mint was closed in November 1278 owing to malpractices by Phelip, which will be discussed in a later article, and the other mints followed suit shortly thereafter and were not re-opened until the production of the new coinage of Edward I from 1279. At that time the vast majority of the voided long cross pennies would have been handed in and exchanged for the new coinage. The late 1270's were a relatively peaceful time and hence the lack of coin hoards from this period.

Surviving Bury and Durham class 7 coins are very rare, London Renaud coins are less rare, and London coins of Phelip are the most commonly seen class 7 coins today. Note that no coin of class 7 (or class 6) is yet known for Canterbury. There is some useful information from Bury, and that is the change of moneyer in the Spring of 1278. Robin Eaglen[3] tells us that Joceus the Goldsmith, "IOCE" on the coins, was presented in the spring of 1278 by Simon of Kingston, sacrist at Bury, to replace John de Bernedisse, "ION", who had been appointed in 1265, and both moneyers are known in class 7 by two sets of dies. Now if both moneyers minted coins at about the same rate, and a similar or equal number of dies exist for each, then the implication is that John commenced minting class 7 perhaps near the beginning of the last quarter of 1277 given that ION's production period ended in November 1278. Discovery of further dies could easily change this timing estimate.

At Durham, Martin Allen[4], chose to not estimate the output of Long Cross classes 5g, 6 and 7 between c.1260 and 1278 in the absence of documentary evidence and adequately recorded large hoards.
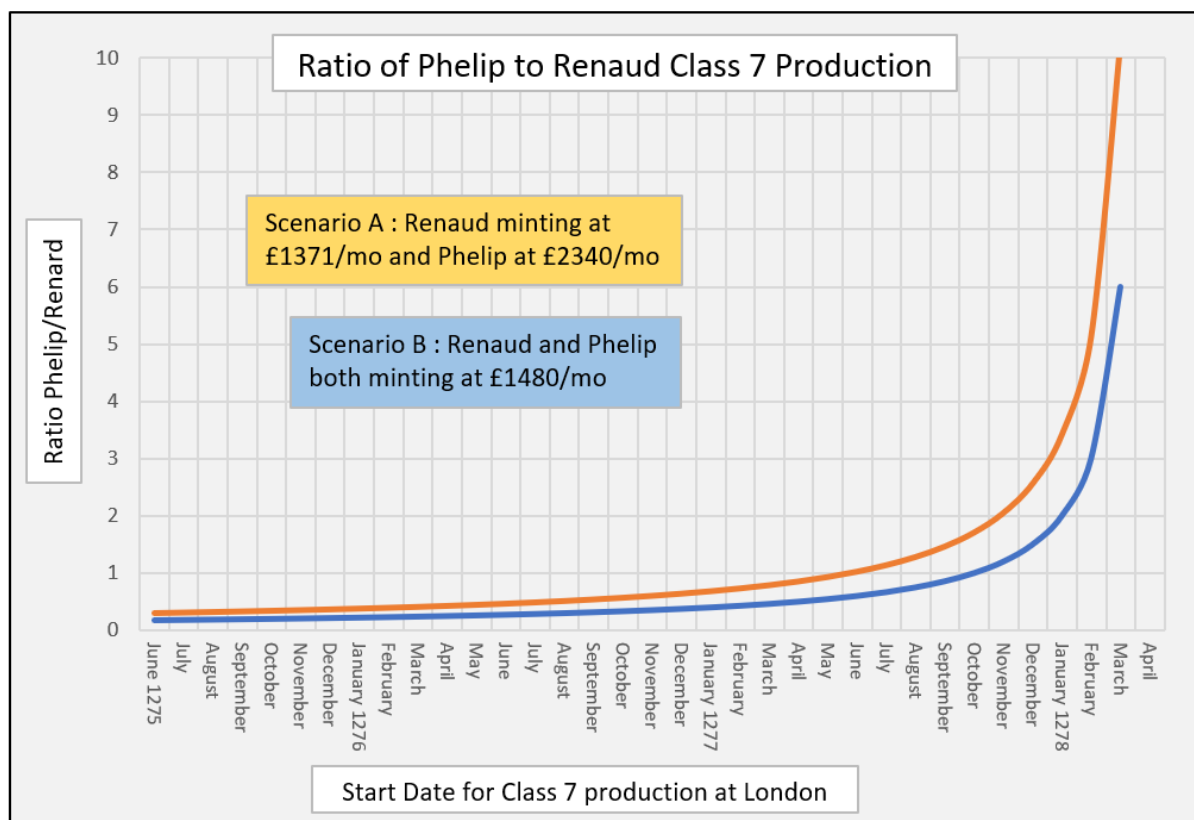
Looking again at the London production data shown on the previous page, and regardless of where class 6 ended and class 7 commenced, we see average production of about £1,500 - £1,700 of coin in the first and third periods, but reduced production in the June 1274 to June 1275 period. Given that coin production during the majority of the last period was under Renaud, and only in the last six months under Phelip, we might expect that coins of Renaud would be much more common than those of Phelip; that this is not the case indicates that production could have been much higher during the tenure of Phelip and/or Renaud could have started producing class 7 later than previously thought.

To explore the various possibilities, I have modelled several scenarios, and have looked at the resultant ratio of Phelip to Renaud coins produced. The starting point is the £60,663 of pennies minted from June 1275 to Nov 1278 which averages £1,480 per month over the 41-month period. Class 7 may have commenced earlier than this period or within the period. The indication from the Bury data was that maybe Bury commenced class 7 production around the beginning of the 4th quarter of 1277, however the data that this is based on, i.e. the number of known dies for ION and IOCE, is not statistically reliable given the small number of samples. It does, however, perhaps point us to a class 7 production start-up date commencing within the 41-month period being considered here.

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[3] Robin Eaglen, 'The Abbey and Mint of Bury St Edmunds until 1279', Spink Books (2006)
[4] Martin Allen, 'The Durham Mint, 2003

The graph below plots the Phelip/Renaud production ratio for class 7 pennies on the vertical axis and the start date for class 7 at London on the horizontal axis. Production prior to the class 7 start-up would be of classes 5h and 6. The two scenarios shown are (a) in blue, the average production rate of £1480 per month as given by the £60,663 figure over 41 months, and (b) in orange, a scenario where Phelip is running the mint at about full capacity and producing coins at the rate of £2,340/mo. With Phelip's higher production rate Renaud's is adjusted down to £1,371 in order to still match the £60,663 figure for the 41 month period. This latter production rate assumes Renaud died in April 1278 and produced no coinage that month.

Ratio of Phelip to Renaud Class 7 Production

Scenario A : Renaud minting at £1371/mo and Phelip at £2340/mo

Scenario B : Renaud and Phelip both minting at £1480/mo

Start Date for Class 7 production at London

Production of class 7 would most probably have commenced no later than that at Bury so I would expect class 7 to have started no later than the 4th quarter of 1277. From the graph and taking the Phelip maximum output scenario (a), we see that a ratio of 2:1 for Phelip to Renaud coins is reached in November 1277, and a ratio of 3:1 is attained at year-end 1277.   The constant production rate, scenario (b), with a production ration of 2-3 gives class 7 start-up dates of January/February 1278 which is not incompatible with the Bury dates.

The above approach suggests a 4th quarter 1277 date, or possibly early 1278, for the commencement of class 7 at the London mint. To have a date earlier than this one must ignore the data on the relative abundance of Phelip versus Renaud's pennies and/or have a situation where Phelip's production rate is even higher, and that would probably require him to have used more than one or two dies at a time. This date is later than some other estimates and would mean that production of classes 5h/5i/6 would have continued a year or so longer than previously thought and would also probably imply a 1277 date for class 6 coins.

The above two scenarios are summarised in the following table:

		November 1277 Renaud	November 1277 Phelip	January 1278 Renaud	January 1278 Phelip
			Class 7 Commencement Date		
	Months	5	6	3	6
Scenario A	Production Rate (£/mo):	£1,371	£2,340	£1,371	£2,340
	Total £ minted:	£6,855	£14,040	£4,113	£14,040
	Ratio Phelip/Renaud:		2.0		3.4
Scenario B	Production Rate (£/mo):	£1,480	£1,480	£1,480	£1,480
	Total £ minted:	£7,400	£8,880	£4,440	£8,880
	Ratio Phelip/Renaud:		1.2		2.0

Renaud's production is from the date shown to end March 1278
Phelip's production is from Mid-May to Mid November 1278

If we accept that the observation of Phelip's class 7 coins nowadays being 2-3 times more abundant than those of Renaud is proportional to past production then a range for class 7 production at London from Nov 1277 to Jan 1278 looks feasible. Using the scenario (a) production numbers for an estimate of the number of pennies produced we may now make an estimate of the number of coin dies that would have been needed. There are a number of widely varying ranges of die wear that have been published. Here we use the figures given by Allen[5].

Average # of coins from each die	Obverse Dies	Reverse Dies
Min - Max	20,000 - 50,000	10,000 - 25000
Mid-range estimate	35,000	17,500

If we simply take the mid-points then we have a rough idea of the number of dies that may have been utilised. Examples from all the production dies are unlikely to have survived. However, this exercise has demonstrated the possible number of dies that would have been produced; today perhaps only a small proportion of the dies are represented.

This article serves to set the scene for a description of the coins of both Renaud and Phelip, and these will be described in the subsequent two articles.

To extend the study of these coins the author would appreciate receiving images of any London class 7 coins of Renaud or Phelip that readers may have in their collections. Images may be emailed to robtpage@gmail.com   Finally, I would like to acknowledge the helpful review of the draft of this revised article by Bob Thomas, his comments have proved invaluable, however any errors remain mine alone.

Scenario (a) - Estimates of Number of Dies Utilised

	Obverse Dies	Reverse Dies
Coins per die	35,000	17,500
i) November 1277		
Renaud (£6,855)	47	94
ii) January 1278		
Renaud (£4,113)	28	56
Phelip (£14,040)	96	193

[5] Martin Allen, 'Mints and Money in Medieval England', Cambridge University Press, 2012.

Examples of Class 7 Pennies from the London Mint

Images courtesy of Mark Winiger (#1,2) and Bob Thomas (#3)

Class 7, Renaud, c. 1276 AD

Class 7, Phelip, 1278 AD (Two examples)