

Place bricks – their making, properties and use

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Most terrace houses in London dating from before the late 19th century incorporate two types of bricks – facing bricks and place bricks. The facing bricks, used for the external faces of the front & rear walls, the exposed flank walls and the party walls projecting above the roof, at least from the late 17th century, were usually the familiar yellow London stocks, which were known as ordinary grey stocks, sometimes combined with red and/or finer bricks for the arches and jambs of openings. Much has been written about the facing bricks and other visible ornamentation, but this note is about the inferior less costly bricks generally used for backing external walls and for all internal & party walls, known as place bricks, and amounting to about 80% of the total number of bricks in a typical terrace house. To summarise - stocks were used for all the brickwork exposed to view in the finished construction; the remainder were all place bricks.

They are said to be called ‘place bricks’ because they were originally not made on a stock or pallet, but were turned straight out of the mould on to the ground where they were left to dry before being built in to a clamp for firing. Later they were made in the same manner as stock bricks, but of inferior ingredients. Several contemporary sources state that place bricks were those on the outside of the clamp and therefore under fired, but this cannot be true because it implies that they were made of the same materials and were almost a by-product of stock bricks, and would not meet the demand for the much greater quantity of place bricks that were required. Under firing actually results in orange (or salmon) coloured bricks which were known as samel bricks, which were as weak as place bricks but not made with inferior materials.

At times when development in London was proceeding apace, place bricks were required in much greater quantity than any other type of bricks and must have been purpose made, perhaps by brick makers who specialised in their manufacture, but I have not discovered contemporary references to this branch of the trade.

Nathaniel Lloyd quotes the Ordinances of Corporations Act of 1504 (19 Henry VII. c.7), which sheds light on their manufacture:

" Notwithstanding Acts of Parliament, Orders and Ordinances, persons within fifteen miles of the City of London dig clay at unseasonable times of year, make bricks of bad stuff and unsizable dimensions, and do not thereof mix great quantities of soil called Spanish and in burning thereof use small ashes and cynders, commonly called breeze, instead of coals and burn the bricks, commonly called Grey Stock Bricks in Clamps, and the bricks commonly called Place Bricks in the same Clamps, on the outside of the said Grey Stock Bricks, by means whereof great part of the bricks now usually made are so hollow and unsound that they will scarce bear their own weight. And whereas there is at present no provision made by any law for the dimensions of bricks, etc and all bricks shall be burnt in kilns or in distinct clamps, the Place Bricks by themselves and the Stock Bricks by themselves."

and then enacted:

*"All earth . . . shall be dug and turned between the first of November and the first of February; no part made into bricks until after the first of March and no bricks made for sale between the first of March and the twenty-ninth of September. No Spanish shall be mixed with brick earth, nor any breeze used in the burning and all bricks shall be burnt in kilns or in distinct clamps, the Place Bricks by themselves and the Stock Bricks by themselves."*¹

and this was reiterated in the Brick making Act 1725 (12 Geo. I. c. 35) but, later, in the Brickmaking Act 1729 (3 Geo. II. c. 22) it was evidently found to be unworkable or unenforceable, so it allowed: *"Stock-Bricks and Place-bricks may be burnt in one and the same Clamp."*

Neve, writing in 1703, says of stock bricks:

*"These differ not from Place bricks in form, their difference lying concealed in the Quality of the Earth; they are made upon a Stock..."*²

and later

"Now Workmen tell me they are forced to have above one method in making bricks not for fancy sake but out of pure Necessity;"

Batty Langley, in 1749, writes:

*"The Kinds of Bricks used in and about London are the following, viz. Place Bricks, Grey and Red Stock Bricks, and Paving Bricks. Place Bricks are the most ordinary Sort that are made, and are therefore used in Foundations, Party Walls, Insides of Fronts, &c. of which there are two Kinds, viz. The common ordinary Sort, and another Sort, which is made with something more Neatness, after the Manner of a Grey Stock Brick, which are sold at a Shilling per Thousand more than the common Sort, and are called Place Bricks, made Grey Stock Fashion. These Sort of Bricks, when thoroughly burnt, for the Uses aforesaid, are as good as Grey Stocks, and cheaper; but if they are not so, but are what is called Samel, they will crush in lofty Buildings, and cause Settlements, which in some Buildings have been their Ruin; and therefore, in Contracts for Place Bricks, it should always be stipulated, that all Samel Bricks be excluded."*³

The differences in manufacture between place bricks and grey stocks are described in the entry for bricks in Owens's Dictionary, published 1763:

Making of BRICK. With regard to the manner of making bricks, we have place-bricks, generally made on the eastern part of Sussex; so called because of a level smooth place just by where they struck or moulded. In this place, the bearer-off lays the bricks firmly down in ricks or rows, as soon as moulded, where they are left till they are stiff enough to be turned on their edges, and drest, i.e. till their inequalities are cut off; when they are dry, they carry them to stacks, or places where they row them up, like a wall of two bricks thick, with some small intervals betwixt them,

to admit the wind and air to dry them. When the stack is filled they are covered with straw on the top, till they be dry enough to be carried to the kiln to be burnt. Stock-bricks are of the same form with place-bricks, though different in the quality of their earth, and manner of making. They are made on a stock, that is, the mould is put on a stock, after the manner of moulding or linking of tiles; and when one brick is moulded, they lay it on a piece of board, a little longer than the brick, and on that brick they lay another like piece of board, and on this, another brick, till after this manner they have laid three bricks on one another; and so they continue to strike and place them on the stage, as they do tiles, till the stage is full, then they take each three successively, and carry them to the stacks, and turn them down on the edges, so that there will be the thickness of a thin piece of board betwixt each brick. When the stack is filled with one height of bricks, from one end to the other, they begin to set them upon those first laid on the stack; by that time they will be a little dried, and will bear the others; for they are moulded of a very stiff earth. When they come to set a second, third, &c. height or course, they cater them a little, as they call it, to prevent their reeling. When the stack is as high as they think fit, they cover them with straw, as they do place-bricks, till they be dry enough to burn. This way is more troublesome than that of making place-bricks; but they are forced to have recourse to it in many places, where, if they laid their bricks abroad in a place to dry, as they do place-bricks, the nature of the earth is such, that they would burst to pieces. ⁴

and Isaac Ware, writing in 1756 writes:

" Grey Stocks are made of purer earth and better wrought, and they are used in front in building, being the strongest and handsomest of this kind; the place bricks are made of the Clay, with a mixture of dirt and other coarse materials and are more carelessly put of hand, they are therefore weaker and more brittle, and are used out of sight and where less stress is laid upon them;" ⁵

A letter quoted by Nathaniel Lloyd dated 1683 says

"We make two sorts of brick, viz., Stock bricks and Place bricks. The Stock bricks are made solid, strong and so hard, that we have laid them under a Loaden Cart wheel, and yet they will not break." ⁶

But place bricks were not all of poor quality, as is evidenced from the craftsmen's accounts for the building of Christ Church, Spitalfields in which the contract in July 1714:

"provided for their 'useing in the said Works good and sound bricks hard and well burnt, picking out such as are semel or soft burnt Bricks, and such as are shatterd or shaken in the making or burning, which are to be laid aside and Carried out of the Works, To the End that none but hard and sound place Bricks be used in the building (except where direction shall be given to use the Grey Stock Bricks amongst them) all which sorts are to be of the best and soundest Materials." ⁷

and James Campbell confirms that place bricks were used in conjunction with stocks by Christopher Wren in the construction of the vaults over the crypt of St Paul's Cathedral in 1676-9. ⁸

These confirm that place bricks were a product in their own right at that date, and indeed also in the 19th century, when the Globe Pit Brickfield in Thurrock:

“produced stock bricks including shipping stocks, grey stocks and common stocks. Paviers and place bricks were also produced”⁹

but by the end of Queen Victoria’s reign, they had become a by-product of the various grades of clamp-burnt bricks, as is shown by the references to them in Rivington’s Building Construction (1904):

Classification of clamp-burnt bricks. -The subjoined list of the names for clamp-burnt bricks, adopted in a Kentish brickfield supplying the London market, may be taken as a specimen.

The bricks are divided generally into three classes - Malms, Washed, and Common, according to the manner in which the earth for them is prepared. For the third or Common class the earth is not washed at all. All three classes are moulded and burned in exactly the same manner, and are then further sorted into a number of varieties according to the manner in which they have been affected by the fire-

The classes are subdivided as follows, with their price per thousand at brickfield:-

	<i>Cutters</i>	<i>140/-</i>
	<i>Best Seconds</i>	<i>70/-</i>
	<i>Mean do.</i>	<i>80/-</i>
	<i>Brown Facing Paviers</i>	<i>55/-</i>
<i>Malms</i>	<i>Hard Paviers</i>	<i>50/-</i>
	<i>Shippers</i>	<i>32/6</i>
	<i>Bright Stocks</i>	<i>37/6</i>
	<i>Grizzles</i>	<i>19/-</i>
	<i>Place</i>	<i>16/-</i>
	<i>Shippers</i>	<i>28/6</i>
	<i>Stocks</i>	<i>20/-</i>
<i>Washed</i>	<i>Hard Stocks</i>	<i>20/-</i>
	<i>Grizzles</i>	<i>17/-</i>
	<i>Place</i>	<i>13/-</i>
	<i>Shippers</i>	<i>28/-</i>
	<i>Stocks</i>	<i>24/-</i>
<i>Common</i>	<i>Grizzles</i>	<i>16/-</i>
	<i>Rough Stocks</i>	<i>16/-</i>
	<i>Place</i>	<i>12 /-</i>

The prices above mentioned serve only to show the relative value of the different classes of bricks. The actual market rates vary of course from time to time, and depend upon seasons, etc.

Seconds are similar to cutters, but with some slight unevenness of colour.

Bright fronts are the corresponding quality from “washed” earth.

Facing Paviers are hard-burnt malm bricks of good shape and colour used for facing superior walls.

Hard Paviers are rather more burned, and slightly blemished in colour. They are used for superior paving, coping, etc.

Shippers are sound, hard-burned bricks, not quite perfect in form. They are chiefly exported, ships taking them as ballast.

Stocks are hard-burned bricks, fairly sound, but more blemished than shippers. They are used for the principal mass of ordinary good work.

Hard Stocks are overburnt bricks, sound, but considerably blemished both in form and colour. They are used for ordinary pavings, for footings, and in the body of thick walls.

Grizzle and Place bricks are underburnt. They are very weak, and two out of five "common" or unwashed place bricks are allowed to be bats, the stones left in the unwashed earth making them very liable to breakage.

These two last-mentioned descriptions are only used for inferior or temporary work, and are commonly covered with cement rendering to protect them from the weather when intended to be permanent.¹⁰

In the discussion to a paper delivered to the RIBA in 1860 it was reported:

*"Mr Dines, Visitor, said the experiments he had made with bricks had been principally with reference to the crushing force. He believed that, when walls gave way, it was more often owing to the mortar than to the bricks. The crushing weight varied exceedingly: good stocks would bear thirty tons, but some bricks would not crush with a pressure of eighty tons. The common place bricks of London would bear five tons"*¹¹

This confirms what most people working on old buildings in London discover, that many of the place bricks they encounter are the soft friable red bricks of which most party walls, internal walls and the backing to external walls faced in yellow or red stocks are built, and they are usually laid in a weak non-hydraulic lime mortar. Place bricks usually disintegrate into small pieces when dropped, or, if they fall whole, they will crush to dust when trodden on. Mr Dines is reporting that these bricks crush under a stress of less than 2 N/mm², so the usual allowable basic stress of 0.42 N/mm² for walls built of unknown bricks laid in a weak lime mortar is certainly not too pessimistic. (This is the metric equivalent of the allowable basic compressive stress of 4 tons/ sq ft given in the LCC By-Laws 1938)¹²

People working on old buildings in London will also have discovered that the half brick facing skin of ordinary grey stocks tends to part from the place brick body of the wall. This discontinuity in the wall is due to several causes. First the use of bats for most of the headers in the facing skin, to save the more costly stocks and to make use of the bricks broken in transit, secondly the difference in bed joint width, finer in the facing skin, meaning that the courses only occasionally coincide, and lastly the different type of mortar in the two parts of the walling.

According to Batty Langley (1749): the inside mortar "*is generally made with pit sand, which requires more or less lime, as it abounds more or less with loamy particles*", whereas outside mortar "*should be made with the sharpest Grit-sand that can be had, as being best able to withstand the Insults of Rains &c. which Loamy Sands, cannot so well do – and which therefore should not be used in any Part of a Building, that is exposed to the weather.*"¹³

It is sometimes surprising where place bricks are to be found. When the stucco was removed from one of the external walls at St John's Lodge, one of the large mansions in the middle of Regent's Park, dating from the first half of the 19th century, it revealed

place bricks laid in lime mortar, except for the arch over an opening, and the opening reveals, which were both of London stocks laid in Roman cement mortar.¹⁴ The bricklayer had clearly realised that if he tried to cut place bricks to build the jambs and arch, they would shatter at a blow from his trowel, so he used stocks. This goes to show that place bricks can be found anywhere they will be concealed behind stucco or plaster or panelling, even in what would be expected to be the highest class of house construction.

Place bricks were significantly cheaper than stocks, as is shown by the following table.

The ratio of costs, falling from stocks costing a third more down to not much over a tenth more, is not in my experience an indication of an improvement in the quality of place bricks or a reduction in the quality of stocks, but suggests an increasing cost of labour in relation to the cost of materials.

The ratio of the costs of walling shows why the inferior weaker place bricks were used for all the concealed walling.

Prices stated for ordinary grey stocks are for the cheapest stocks; best facing stocks & malms were of course more expensive. Hence the walling cost ratios will increase when better facings are chosen.

Prices of place bricks (& grizzles from 1895), of ordinary grey stocks and of walls

Date	Author		Place bricks & grizzles	Ordinary grey stocks	s/p s/g	All place bricks (ap)	Half & half (hh)	hh/ap	All stocks (as)	as/ap
			s/1000	s/1000		£.s.d/rod	£.s.d/rod		£.s.d/rod	
1749	Batty Langley		14	18	1.29	4.13.6	5.12.0	1.28		
1755	Salmon		14	20	1.43	5.5.0				
1804	Crosby's	1760-1790	17	22	1.29	7.5.6	8.13.6	1.19		
		1790-1803	30	39	1.30	10.16.0	12.16.6	1.19		
1826	Kelly's?		32	42	1.31	13.8.9	14.15.9	1.10	16.2.9	1.20
1838	Skyring's		32	40	1.25	16.4.0	17.0.0	1.05	17.16.0	1.10
1839	Laxton's		33	42/6	1.29	11.0.0	12.2.6	1.10	13.9.0	1.11
1851	Kelly's		28	35	1.25	10.14.9	11.18.7	1.11	12.16.3	1.19
1857	Weale?		30	38	1.27	11.16.0	12.16.0	1.08	13.10.0	1.14
1862	Atchley's		32	40	1.25	12.10.0	13.5.0	1.06	14.0.0	1.12
1863	Laxton's		36	40	1.11	12.12.0	13.11.0	1.08	14.5.0	1.13
1870	Skyring's		30	40	1.33	13.13.0	14.10.0	1.06	15.13.0	1.15
1878	Laxton's		43	52	1.21	15.0.0	15.15.0	1.05	16.13.0	1.11
1895	Laxton's		32	40	1.25				14.17.6	
			g 34		1.18	13.15.0	14.5.0	1.04		1.08
1901	Laxton's		44	50	1.14				17.2.6	
			g 45		1.11	15.19.0	16.10.0	1.03		1.07
1907	Laxton's		32/6	40	1.23				16.17.0	
			g 35		1.14	15.13.0	16.4.3	1.04		1.08
1915	Laxton's		33/6	49	1.46				17.17.6	
			g 43		1.14	16.11.6	17.10.0	1.06		1.07
1930	Laxtons	Flettons	64	105/6	1.65					
1936	Laxton's	Flettons	62/6	87/6	1.40					
1950	Laxton's	Flettons	97/9	247/3	2.53					

Notes to table

After 1895 Laxton only gives costs of walling for grizzles, rather than place bricks, and in this connection Mitchell (1903) differentiates between them:

Grizzle — Underburnt, but sound and of good form; used for inferior or temporary work, and where not subjected to heavy loads.

Place — Underburnt, weak; containing stones, causing them to be very liable to breakage; for inferior or temporary work. Sometimes place bricks are used in the panels of brick-nogged partitions for the purpose of retarding sound.¹⁵

This implies that grizzles are what were formerly known as samel bricks, and that place bricks were by that time no longer used in walling, and perhaps were hardly made any longer, but were surprisingly referred to on 25th November 1952 by the Minister of Works, who said, in an answer to an MP's question: "Place bricks may be roughs or commons." ¹⁶ but what was meant by any of the terms is not explained.

By 1930, Flettons were, in relation to stocks, cheaper than place bricks had ever been.

By 1950 cheaper facing bricks, such as sand faced Flettons, had become available and stocks as facings were at the top end of the market.

It will be interesting to learn if any members of the Society can shed further light on these theories about the making, use and costs of place bricks, or on the makers who specialised in place bricks or on the author or on the author of the quotation from the Owens's Dictionary.

References

1. Lloyd, Nathaniel, *A history of English brickwork* (1934), pp. 33-5
2. Neve, Richard, *The City and Country Purchaser* (1726), p 42, quoted by Nathaniel Lloyd, p 21
3. Langley, Batty, *The London Prices of Bricklayers' Materials & Works* (1749), pp. 1-2
4. *A New and Complete Dictionary of Arts and Sciences*; By a Society of Gentlemen, The second edition, printed for W Owen (London 1763), pp. 377-8
5. Ware, Isaac, *The Complete Body of Architecture* (1756), p.59, quoted by Nathaniel Lloyd, p 23
6. Lloyd, Nathaniel, op cit, p 19
7. *Records of the Commissioners for Building Fifty New Churches: Contracts I*, pp 12,17 (Reproduced in Appendix: Craftsmen's accounts for the building of Christ Church', Survey of London: volume 27: Spitalfields and Mile End New Town (1957), pp. 289-296.)
8. Campbell, James W P, *Building St Paul's* (2007) p 106
9. Scheduled Monument Record no 15462 – Essex County Council
10. *Rivington's Building Construction*, vol 3, 6th edn (1904) pp 105 & 6, reprinted in facsimile by Donhead.

11. Trans RIBA (1860-1) p.135
12. London Building (Constructional) By-laws 1938
13. Langley, Batty, op cit, pp. 33 & 37
14. Personal observation when St John's Lodge was in course of conservation and extension c. 1990.
15. Mitchell, Charles F, *Building Construction*, vol 2, 4th edn(1903) p 84.
16. *Hansard* 25 November 1952 vol 508 cc36-7W 37W.

Price books

In addition to the ten annual volumes of *Laxton's Builders' Prices* listed in the table, the following have been consulted:

- Batty Langley's *The London Prices of Bricklayers' Materials & Works* (1749)
- Salmon, William, *The London & Country Builder's Vade Mecum* (1755)
- *Crosby's Builders' New Price Book for 1804*
- *The Practical Builder's Perpetual Price-Book* (c.1826) published by Thomas Kelly
- *Skyring's Builders' Prices* (1838 & 1870)
- *Kelly's Practical Builder's Price Book* (1851)
- *The Builder's and Contractor's Price Book* published by John Weale (1857)
- *Atchley's Builders' Price Book for 1862*

Place bricks – two postscripts

- In a terrace house on the west side of Lowndes Square dating from 1844-6, when the plaster was removed from the party walls and the internal face of the front & back walls, we were surprised to discover that they were not place bricks but were all ordinary grey stocks laid in a good lime mortar. This demonstrates that there were exceptions to the general rule that inferior place bricks were used for all brickwork in London terraced houses that was not to be exposed to view, and that construction by Thomas Cubit, the developer and builder of these houses was of a better standard than most developers at that date. It is also interesting to note that the party walls were thick enough to accommodate all the flues and the fireplaces – there were no projecting breasts.
- The 1774 London Building Act, in clause XLI, states that a rate of £7.16.0 per rod is to be allowed for new party walls, with 28/- credit for old materials. Comparison with the rates for brickwork given in Crosby's price book for the period 1760-1790 (in the table in my note on place bricks published in BBS Information No 112) of £7.5.6 for place bricks and £8.13.6 for walls of half place bricks and half stocks confirms that the draughtsman of that Act was allowing only for the use of place bricks, as observation today indicates was the general practice.