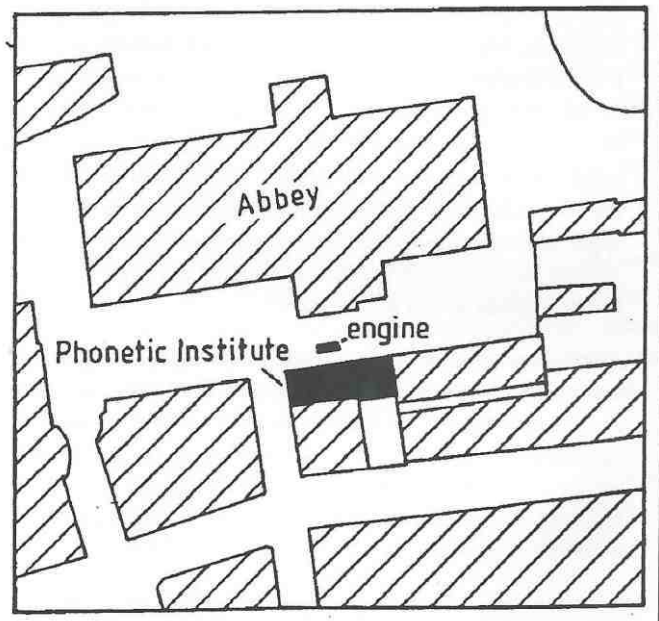


A Horizontal Steam Engine in the Centre of Bath

Robert Bell

In 1993, Bath Archaeological Trust carried out excavations in the eighteenth-century cellars immediately to the south of Bath Abbey, prior to the creation of the Abbey Heritage Centre. Among the discoveries was the seating of a Victorian steam engine, which had powered the printing press of Isaac Pitman, the pioneer of shorthand writing and an enthusiastic advocate of phonetic spelling.

The seating was located close to the north wall of 6-7 Kingston Buildings (currently occupied by Bath City Council's Planning Department), and was aligned parallel to the building. It was rectangular, measuring 3.1m by 0.82m (10ft 2in by 2ft 8in), and was sunk 0.45m (1ft 6in) below the floor. It had a brick base and vertical sides made of limestone ashlar slabs with brick and limestone rubble backing. On the north side of the engine seating there was a separate limestone-lined rectangular cavity, which would have contained the fly-wheel. This



Location of engine bed and Phonetic Institute

measured 1.46m by 0.3m (4ft 8in by 1ft) and was 0.76m (2ft 6in) deep. The grooves in the blocks supporting the axle-bearing were still visible and two rows of slots ran round the crown of the vault, directly above the engine-seating, presumably designed to carry the brackets supporting the drive mechanism.

The identity of the manufacturer of the engine is, as yet, unknown, but the engine-seating can be closely dated owing to a series of mishaps experienced by Pitman. In May 1874 he paid £600 for the property, formerly used as lodging houses, because his Phonetic Institute had outgrown its existing premises in Parsonage Lane, where printing was not mechanised.¹ The new property was converted over the next six months, and Pitman acquired a second-hand platen machine, capable of printing 600 sheets per hour, so that he could expand the circulation of his weekly *Phonetic Journal*. This was powered initially by a two horse-power vertical engine,² but this was not a success. Pitman described, in an open letter to his readers in May 1875:

'... the difficulty of getting our machine to work at all, through our having been deceived in the purchase of an engine and boiler that eventually proved not worth the cost of erection'.³

He decided to replace it with a four horse-power horizontal engine,⁴ but a neighbour then complained about the continuous noise from the printing press, and demanded £150 compensation and the daily cessation of the machine between 12:00 noon and 1:00 pm.

Pitman was threatened with legal action and, in the same open letter, he voiced his frustrations:

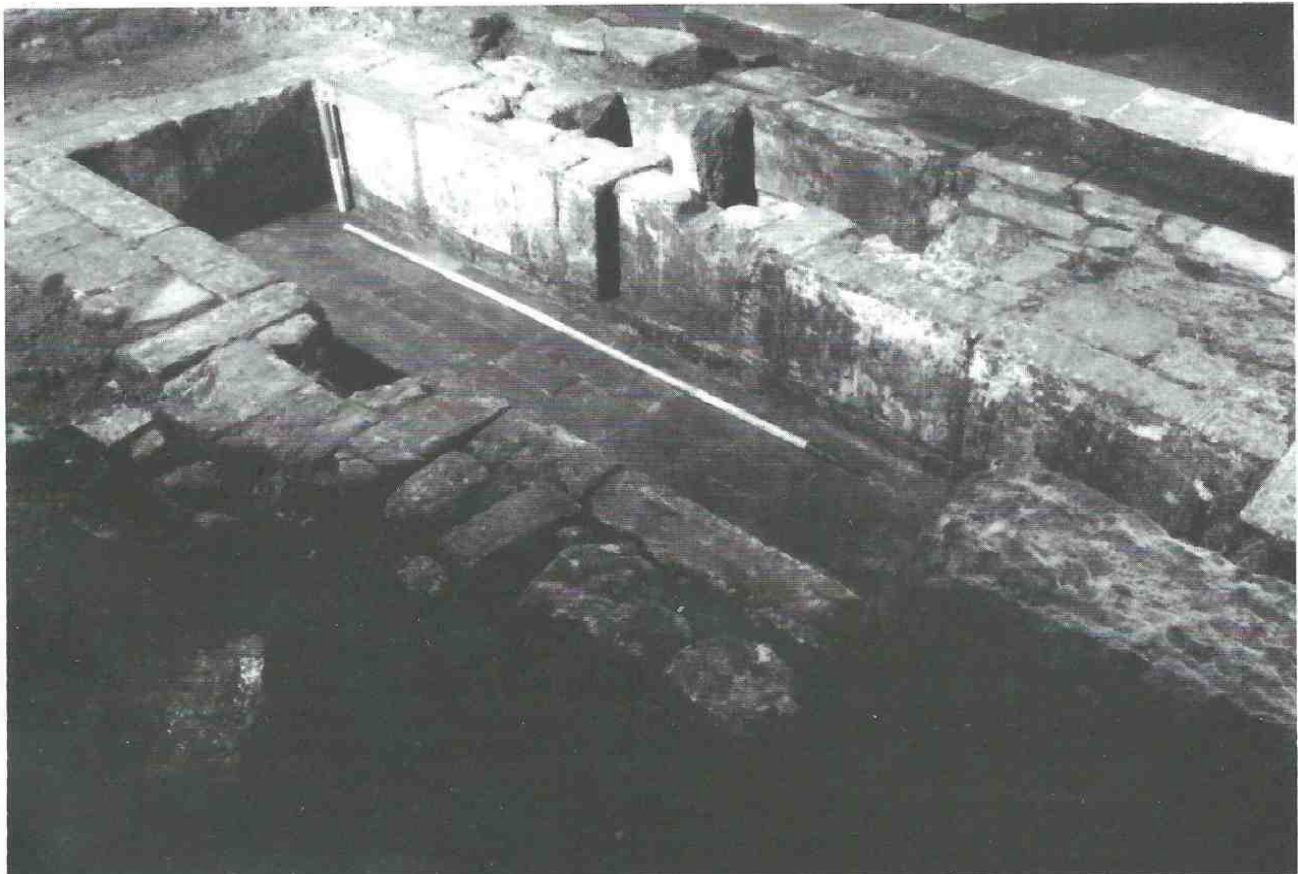
'The masons have now (1 May) been working two months in laying down the new boiler; removing the machine, and making the necessary alterations in the premises, and will finish their work in another day; and the engineers were employed three weeks after the engine was made, and just as the work is finished we find that all the labor [sic] and money is thrown away for the present.'⁵

Given that the new engine was located less than 6m from the south transept of the Abbey, the Church authorities may also have objected. In the meantime, Pitman had to revert to printing the *Phonetic Journal* on hand-presses, though luckily the proprietor of the *Bath Herald* stepped in and offered the temporary use of his presses.⁶

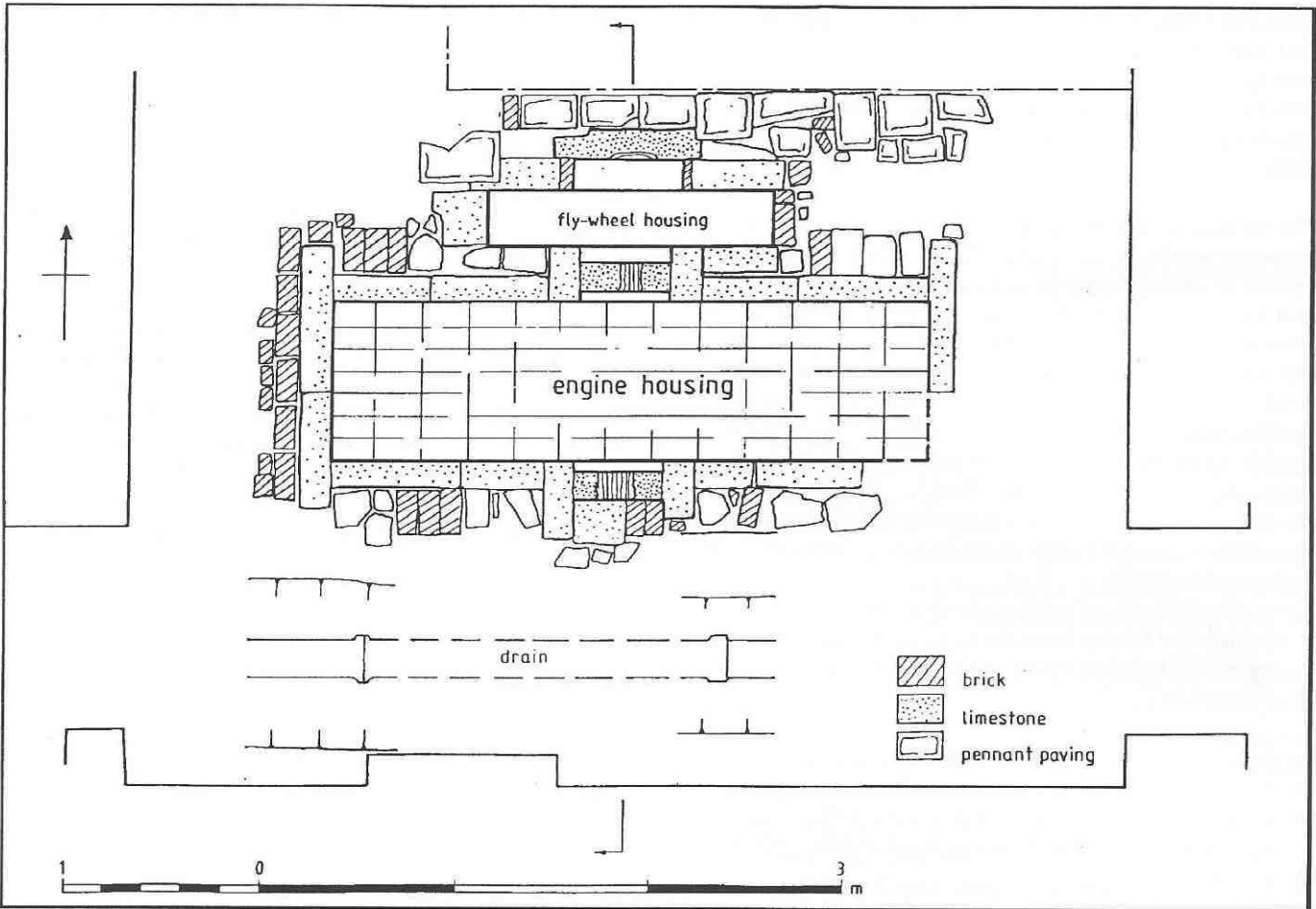
Evidently the matter was sorted out, and the Phonetic Institute remained at Kingston Buildings until 1889. In that year it moved to larger premises in the Lower Bristol Road⁷ and the engine was dismantled.

References

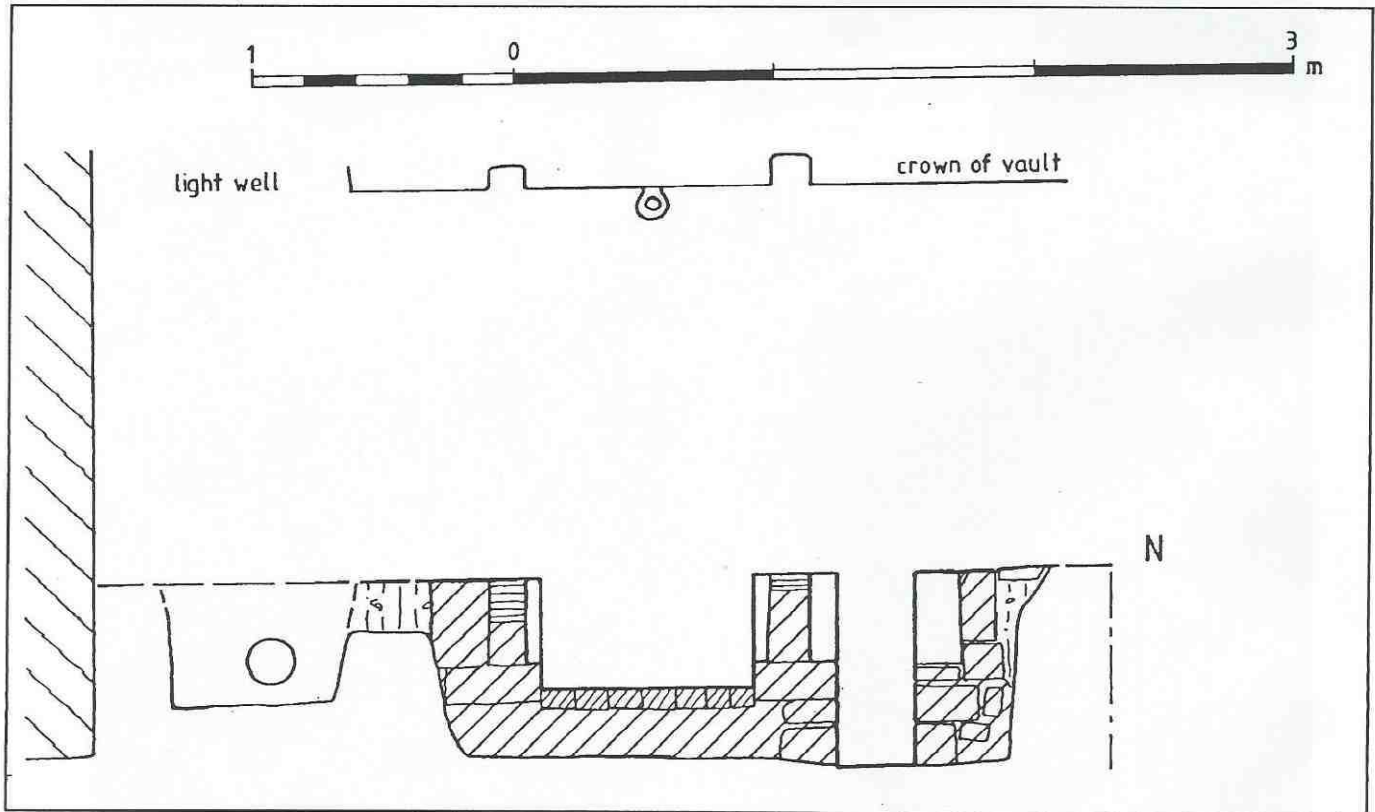
1. Baker, A., *The Life of Sir Isaac Pitman*, (1913) 196
2. Reed, T.A., *A biography of Isaac Pitman*, (1890) 128
3. *Phonetic Journal*, 8 May 1875
4. Reed, note 2
5. *Phonetic Journal*, note 3
6. Baker, note 1, 199
7. Baker, note 1, 276



Engine seating from the south-east



Plan of flywheel and engine seating



Section of flywheel and engine seating (drawings by Kirsty Rodwell)