NOTICES OF THE LATEST DISCOVERIES MADE IN UNCOVERING THE ROMAN BATHS AT BATH, AND THOSE AT HERBORD, NEAR TO POITIERS.¹

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My last report was made to the Archaeological Institute at the Carlisle meeting in 1882. Since then further discoveries have been made at the Roman baths, and a description published by Major Davis, the city engineer, in the Transactions of the Bristol and Gloucester Archaeological Society, which gives an account of the discoveries down to the autumn of 1883.² The paper contains three plans:— Plate V. being a fac-simile of Dr. Sutherland's map, published in 1763; Plate VI. being a fac-simile of Dr. Spry's plan published in 1822, shewing discoveries to that date; and Plate VII. being a plan of the Roman baths as far as discovered to the date of April 19th, 1884. Further examinations are being carried on, and if sufficient money can be raised, the entire arrangement will be made out and planned to scale.

These three plans show the gradual progress of discovery. In my paper read at Carlisle I detailed the progress of these discoveries, referring to the sources of information, and the same has been done more fully by Major Davis in his paper above alluded to, read in Bath to

the Gloucestershire Society.

A very correct and ingenious model of the large Roman bath, and the general plan of the Roman baths, as far as ascertained, was exhibited in the recent Health Exhibition. This no doubt was seen and examined by many members of the Institute. No pains or cost has been spared on this model, but there are extensive portions of the Roman buildings still hidden from sight, and a plan with an explanation will give a more perfect apprehension of the whole.³

completed in time to accompany this notice, or be added in a subsequent number of the Journal.

Read at the Monthly Meeting of the Institute, November 6, 1884.

² (See vol. viii, p. 89).
³ It is hoped that such a plan may be

In my previous paper, I mentioned the use which had been made of the old Roman drain in conveying away the waste water from the spring, and also the discovery of the large Roman reservoir which has been cleaned out and utilized. This is immediately below the King's bath, at the back of the modern Pump Room.

This is also utilized, and now forms the reservoir for the waters of the mineral spring, and the baths and fountains are supplied from it with the hot water as it rises pure from the source. Thus both the Roman drain and the Roman reservoir are, after a lapse of fifteen centuries or

more, restored to their ancient purposes.

The dimensions of this reservoir are 50 feet by 40 feet, and the form, as before stated, an irregular octagon. The masonry is formed of stones 6 feet 7 inches long, by 3 feet thick, and the lead which covered the tank or cistern is 30 lb. to the square foot.

The hot mineral spring yields 167 gallons per minute,

at a temperature of 116° Fahrenheit.

The great central bath seems to have stood in a large hall, 111 feet 4 inches in length, by 68 feet 6 inches in width. The depth of the bath is about 6 feet 8 inches. The bottom of the bath measures 73 feet 2 inches by 29 feet 6 inches. The whole was lined with sheets of lead 10 feet by 5 feet, not soldered, but turned up at the edges and burned. Major Davis observes that "This well-secured bottom or floor appears to have been placed in position, rather to keep the hot waters from ascending into the bath from the springs beneath, than to make the bath watertight."

Six steps all round the bath lead into the water, and around the bath is a platform, on the sides of which are recesses for seats. These were for the bathers who were waiting, or for hanging up their dresses when in the bath. The steps into the bath are not covered with lead, and, according to Major Davis, it is doubtful if they ever were

so.

At the bottom step in the N.W. corner was a bronze sluice. This is now preserved in the Pump Room at Bath. The weight is above 1 cwt. 2 qrs. An overflow was provided above the hatchway by a grating, 15 inches wide, which was probably also of bronze, but had been removed.

Many of the stones forming the steps leading into the

bath are 10 feet long.

The large bath is supplied with water from the tank by means of a pipe which brings the water to the N.W. angle, from whence it has been made to spread out and form a small cascade, thus promoting the cooling of the water.

The length of the pipe which brought the water from the reservoir or tank was about 38 feet, but a large portion of the pipe had been removed. The pipe was laid in a channel formed in the floor of the space around the bath. The original Roman work had been cut through in later times, at the point where the pipe was connected with the tank.

In addition to the supply of mineral water, a supply of cold water was also provided for the bath, and conveyed in a leaden tubular pipe $2\frac{1}{2}$ inches in diameter; a length of 24 feet 6 inches has been exposed. The pipe is made with a roll along the top, and burnt so as to cause the ends of the metal to adhere,—there are two soldered joints at intervals of 9 feet. This pipe, which apparently brought the cold water, is made to pass through the body of a recumbent figure, now much mutilated, into a large trough, the position of which is indicated by the stone-

work being cut away to receive it.

For minute particulars I must refer to Mr. Davis' published account, who has bestowed much care in describing every thing concerning the structure and the direction of these pipes for conveying the supply of water. A portion of this large bath still remains covered by a building, which now forms the offices of the Poor Law Board. this could be purchased and removed, as has been done with another house, which was the property of the Bath Corporation, the whole area of the large bath would be uncovered. The city architect has traced the walls of the south platform underneath this building, and they correspond to the portions laid open on the north side. On each side of the ambulatory, or platform surrounding the bath, are three recesses (exedrae), two semi-circular and one rectangular. The rectangular one measures 17 feet in width by 7 feet in depth, but variations exist in the semi-circular recesses,—the width of one being 17 feet long by 7 feet deep, another being 14 feet 3 inches long by 6 feet 9

inches in depth. Six piers, which supported the roof of the bath ambulatory, are still remaining in situ on each side, dividing each length into seven bays. They are built of solid freestone, but, according to the opinion of Major Davis, have undergone alteration. None of the piers or pilasters now standing are higher than six or seven feet. Some fragments of the capitals of the smaller pilasters have been found, but none as yet of the larger capitals,—only a few fragments of the cornices, and but one portion of the frieze, 2 feet 4 inches long by 1 foot 6 inches deep, on which are cut the letters S S I L, six and a quarter inches long.

The platforms are supposed to have been arched, and

the large bath spanned also by an arch.

The side arcades were constructed of brick-boxes, open at the ends, and formed in the shape of a wedge, 1 foot long, and nearly 5 inches thick,—the wedge being nearly 8 inches at the wider end. They were set in concrete. Large fragments of this roofing were found lying on the deposit which had partially filled the bath before the fall of the roof took place. It is impossible to say at what period the roofing was destroyed.

Although the ground plan of the large bath, and that of the smaller adjoining baths, has been clearly ascertained, together with the chambers adjoining the baths, yet the restoration of the original buildings is not an easy matter.

They are given conjecturally by Major Davis, who has been careful to seek for authority for his statements, in the portions of the buildings remaining, and the fragments of decoration discovered in the course of excavation, but before the buildings can be restored with certainty, much more remains to be discovered. The work has wonderfully progressed under his care, and much more may be expected, if funds can be raised for the purpose of still further examination below the streets and houses of the city.

From eighteen to twenty feet below the present surface lie a vast amount of Roman remains still undiscovered,—as for instance, two portions of a fine tessellated floor have lately been laid open in enlarging the airing ground of the Mineral Water Hospital. Some years since other pavements were found in the same locality, and a fine pavement is still preserved under the new wing of the Royal or Casualty

Hospital. These are all within the Roman city walls, and serve to shew the style of houses which must have stood within the Roman area.

Contemporaneously with the discovery and opening of the ancient Roman baths at Bath, a similar discovery and a complete exposure of an entire system of Roman baths, along with other Roman edifices, has taken place at Herbord, within a mile of the small town of Sanxay, eighteen miles from Poitiers. These have been carefully opened and planned and fully described by the French savan who made the discovery some years ago, and who has lately published a detailed account with a series of maps.¹

Having myself visited these interesting remains two years ago, I can judge of the importance of the discovery and the light thrown by them upon the arrangement of Roman

thermal and other baths.

The extent of ground covered by the buildings, their courts, and garden enclosures, is very large, amounting to many acres $(7\frac{1}{2})$, and the buildings, also contiguous to the baths, which are supposed to be hotels or lodgings for the accommodation of visitors, are also very extensive. These have been carefully planned, so that within a bend of the little river Vonne, you have the plan of an ancient Roman provincial watering place, with its temples, baths, hotels, and theatre, all of which have been exposed to view.

The construction of the baths is not so large and imposing as those discovered at Bath, nor is there a thermal spring, such as rises below the great tank and flows into the great swimming baths at Aquæ Solis, but the water is brought by an aqueduct which serves for the supply of the temple as well as the baths.

Although the plan and arrangement of the baths at Herbord is different to those at Bath, yet there is a general correspondence, and by studying their arrangement you get an idea of how much remains yet to reward the explorations which are now being conducted under the

modern city of Bath.

At Herbord you find :-

¹See Memoire Archeologique sur les le pere Camille de la Croix, S.J. (Niort decouvert d'Herbord dites de Sanxay par Clouzot, 22, Rue des Halles).

1. A large open space for a garden, having a passage or promenade round it, with a colonnade.

2. Then waiting rooms for slaves or attendants.

3. Then a large swimming bath, but inferior in size to that at Bath.

4. There are halls for receptions, and for various purposes connected with bathing.

5. There are several hypocausts or heating chambers, and passages with seats for convenience of bathers.

6. There are the remains of a fine portico, and also a subterranean passage leading from the central portions of the bath-building.

These arrangements are on the ground level, but the remains of a stair have been found leading to the upper portion of the building, where the arrangements seem to have been much the same.

The baths, with their adjuncts, appear to have undergone alteration at a late period, as is evident from a careful examination of the work. The waste water was carried off by a drain into the river, which still remainsperfect.

The great hall appears to have been handsomely proportioned and highly ornamented, portions of architectural decorations having been found. The length was about seventy-five feet by forty-nine in width. This hall has semicircular recesses, about sixteen or seventeen feet in diameter, and a rectangular recess between them, as may be noted in the arrangement of the open passage round the great bath at Bath. They contained seats for rest or for conversation, and seem to have had circular vaultings, the ceilings being constructed of wood. The superficial area of the swimming bath was about or above 6,000 feet, that of the great bath at Bath about 7,500.

These discoveries have been already noticed in the Archæological Journal, but have only recently been published by their original discoverer, the Père de la Croix, together with plans executed by himself. Up to the time of my visit, two years ago, only three Englishmen had visited the spot, but any who will make the journey will find an ample recompence for the little time and labour required, though some portions that had been excavated have of

necessity been covered in.

¹ See vol. xl, p. 52.