

CERTIFICATE OF ANALYSIS.

THE LABORATORY,
28, CHAPEL STREET, LIVERPOOL,
July 8th, 1895.

ANALYSIS of sample of water in bottle, labelled water from the Spring of Callirrhoe (Zerka Main), on the east side of Dead Sea. From Gray Hill, Esq.

	Grains per gallon.	Parts per 100,000.
Chloride of Sodium	76.91	109.87
Chloride of Potassium	8.96	12.80
Calcium Sulphate	10.47	14.98
Calcium Carbonate	12.60	18.00
Magnesium Sulphate	9.50	13.57
Magnesium Carbonate	2.66	3.80
Magnesium Chloride ....	.87	1.24
	<hr/> 121.97	<hr/> 174.26

Sulphuretted Hydrogen—·336 grain ; 3.2 c.c. per litre ; .91 cubic inch.

This sample of water had a decided smell of sulphuretted hydrogen, and contains about one-sixth of the quantity contained in the old sulphur well, Harrogate.

The water had probably undergone some alteration from lapse of time ; but, as the bottle was well sealed, and the water was quite clear, the change cannot have been great.

EDWARD DAVIES, F.C.S., F.I.C., &c.
(Edward Davies and Son.)

THE SITE OF THE TEMPLE.

By Lieut.-Colonel C. M. WATSON, R.E., C.M.G.

THERE is, perhaps, no question respecting the city of Jerusalem, with the exception of that concerning the site of the Holy Sepulchre, which has excited more interest, or given rise to more diversity of opinions, than the discussion of the exact position occupied by the Temple of the Jews. So completely has the prophecy of Jesus Christ been fulfilled, that not one stone of that great building would be left upon another, that the very place where it stood is not certainly known, and is still a subject of dispute.

All the authorities who have considered the matter are agreed that it must have stood upon one part or another of the Haram Enclosure which

now surrounds the Moslem Sanctuary of the Dome of the Rock, but that enclosure measures in length more than 1,500 feet, and in breadth an average of 950 feet, covering a superficial area considerably greater than could ever have been included within the courts of the Temple. Numerous have been the theories which have been put forward, and supported by their authors with much vigour, and it is with considerable diffidence that I venture to put down some remarks upon the subject, after reading all that I have been able to find in various works, and after a consideration of the question upon the ground itself.

It has struck me that most of those who have formed an opinion upon the matter have started with some preconceived notion, which has more or less biassed their minds in dealing with it. For example, the late Mr. James Ferguson, whose book on the Temple is most thoughtfully worked out, and is well worth careful study, formed the idea that the Holy Sepulchre was on the site now covered by the Dome of the Rock, and to this consideration all other arguments had to yield. Others, and these certainly the majority of writers upon the Temple, appear to have been convinced that one or more of the ancient masonry walls of the Haram Enclosure must have coincided with one or other of the boundaries of the enclosure, set apart as holy by King Solomon, and believe that the Outer Cloisters and the Court of the Gentiles were included within the old boundary. But it would seem, on the contrary, to be a more satisfactory way of examining the question, first to consider where it was most likely the Temple stood and then to investigate the relative bearing of the outer walls of the Haram Enclosure. And it appears to me that, when the position of the Temple is so examined, it will be found that it is most improbable that any one of the present outer walls formed any part of the circuit of the original Sanctuary of the Mountain of the House of God.

The materials which we have at our disposal for considering the subject may be included under the following heads:—

First. The written evidence of the description of the Temple and its courts in the Mishna, and in the histories of Josephus, supplemented by the Biblical record and some short notices by certain historians.

Secondly. The plan of the Haram and the buildings which it contains, as accurately mapped out under the direction of Sir Charles Wilson.

Thirdly. The levels of Mount Moriah, as it originally existed before Solomon began to build the Temple. These levels are known with a very fair degree of accuracy, thanks to the careful explorations of Sir C. Wilson, Sir C. Warren, Colonel Conder, Mr. Schick, and others.

The writings enumerated under the first head should be assumed to be true unless they can be proved to be false, while no theory that is in opposition to the facts proved by survey and careful exploration can possibly be accepted as sound.

There is one point which should be alluded to, as it has apparently been the cause of mistakes in the study of the question, and that is the use of the word "Temple." This is sometimes applied to the Holy

THE TEMPLE OF JERUSALEM,

AS DESCRIBED IN
THE MISHNA AND BY JOSEPHUS.

A. The Temple.

- a. The Holy of Holies.
- b. The Holy Place.
- c. The Porch.
- d. The Little Chambers.
- e. The Ascent to the Upper Chamber.

B. The Court of the Priests.

- f. The Altar of Sacrifice.
- g. The Chamber of Salt.
- h. " " Parvah.
- i. " " of the Washing.
- j. " " of Wood or Palhedrin.
- k. " " of the Draw Well.
- l. " " Gazith, or of the Sanhedrin.

C. The Court of Israel.

- m. The Inner Cloisters.
- n. The Chamber of the Vestments.
- o. " " of the Pancake Maker.

The Gates of the Inner Court.

D. The House Moked.

- p. The Chamber Moked and Descent to the Bath-room.
- q. The Chamber of the Lambs.
- r. " " of Shew Bread.
- s. " " of the Stones of the Altar.

E. The Gate and House Abtinus.

- F. " " Nitsus.
- G. " " Nicanor.
- H. The Water Gate.
- I. The Gate of the Firstborn.
- J. " " of Kindling.

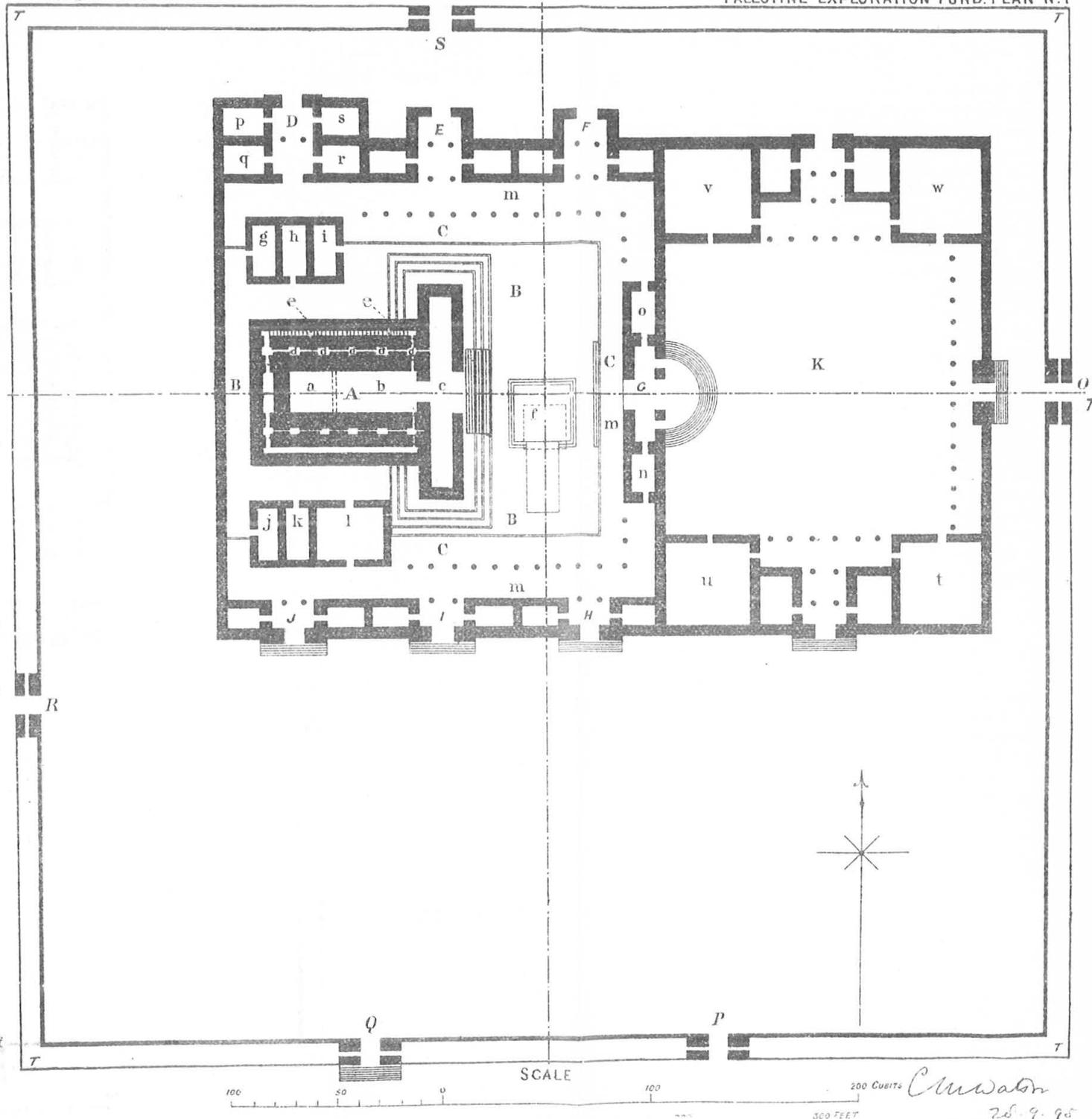
E. The Court of the Women.

- t. The Chamber of the Nazarites.
- u. " " of Oil.
- v. " " of the Lepers.
- w. " " of Wood.

The Outer Court or Chel.

- O. The Gate Shushan.
- P. The East Huldah Gate.
- Q. The West Huldah Gate.
- R. The Gate Kipunus.
- S. " " Tadi.

- T. The Soreg or Boundary of the Mountain of the House.



House itself, sometimes to all the buildings included in the Sanctuary, and occasionally even to the entire area, comprehending the Outer Cloisters and the Court of the Gentiles, as well as the buildings within the Sanctuary. In the following pages I therefore propose to adhere to the following nomenclature, in order to avoid any risk of being misunderstood, and will use the terms given below, commencing from the Temple and working outwards :—

1. The Temple, consisting of the Holy of Holies, the Holy Place, with the chambers over, and on each side of them, and the Porch.
2. The Court of the Priests, surrounding the Temple, in which court were the Altar, the place for killing the sacrifices, and certain chambers used in the holy service.
3. The Court of Israel.
4. The Inner Cloisters. (The Court of the Priests, the Court of Israel, and the Inner Cloisters were all included under the general name of the "Inner Court.")
5. The gates of the Inner Court, of which there were seven, *i.e.*, three on the north, three on the south, and one on the east. There is a remark in the Mishna, which seems to imply that there were also two small gates or doors on the west, but the existence of these is improbable, and is emphatically denied by Josephus.
6. The Court of the Women, to the east of the Inner Court.
7. The Gates and Chambers of the Court of the Women. There were three gates, one on the north, one on the south, and one on the east, and four open chambers, one at each of the four corners.
8. The Outer Court, called the Chel, surrounded by a wall.
9. The Gates of the Outer Court, one on the north, one on the east, two on the south, and one on the west.
10. The Mountain of the House, or Sanctuary—which included the Temple and all the courts mentioned above. The term Mountain of the House is also applied to the line bounding the Sanctuary on its four sides, as well as to the area included within it.
11. The Court of the Gentiles. This was divided from the Mountain of the House by a low wall, called the Soreg, which none but Jews might pass.
12. The Outer Cloisters. These consisted of—
 The Royal Cloister, on the south.
 Solomon's Porch, on the east.
 The Northern Cloister.
 The Western Cloister.

The description in Josephus include the whole of the above, while the descriptions and references in the Mishna give no account of either the Court of the Gentiles or the Outer Cloisters, and deal only with the Mountain of the House, or Sanctuary, and the buildings contained within it. This is a point of great importance, and is, I think, sometimes overlooked in dealing with the question. It is rather to be regretted that

in the Middoth and the Beth Habbechereh there are no details respecting the Outer Cloisters, as they would have been very useful to check the account in Josephus ; but it is evident that the authors of these books cared only for the Sanctuary, and did not pay any attention to the courts and buildings which were not included therein.

It appeared to me that the most satisfactory manner of investigating the question was, in the first place, to make a plan of the Sanctuary from the written descriptions, adhering rigidly to the dimensions so accurately stated in the Mishna, and also to those in Josephus, which are sometimes less accurate, but generally to be reconciled with the former ; secondly, to find how this plan will best fit upon a contoured plan of Mount Moriah, supposing it to be stripped of all existing buildings ; and lastly, to find out how the plan, so fitted to the ground, will agree with the outer walls of the Haram enclosures as now existing, and with the description of the Outer Cloisters, as given by Josephus. No restoration of the plan of the Temple and surroundings can possibly be regarded as satisfactory unless it meets the three conditions : of being in accurate accord with the written description ; of fitting upon the Mountain ; and of not contradicting in any particular what actually exists at the present time.

There are doubtless some discrepancies as regards dimensions between Josephus and the Mishna, but these are not of a serious character. Some rather important points, which one would be very glad to know, are omitted, and in some cases we have description without dimensions, and dimensions without altogether satisfactory description. But it is not difficult, on the whole, to reconcile these ; and there are many most valuable hints given indirectly both in Josephus's histories and in the accounts of the Jewish religious ceremonies in the books of Yoma and Tamid, which afford considerable assistance in completing the plan. There are certain details respecting which we are left in ignorance, and these it is necessary to fill in in the manner that appears the most probable, taking great care that, in no respect, are they in contradiction to any of the old authorities. This is the best that can be done.

I do not propose to allude to any modern authorities upon the Temple buildings, as it would take too long, and it would be necessary to discuss the pros and cons of various theories. As stated above, I prefer to deal with the question only with the aid of the ancient authorities, and with the results of modern explorations.

There is one matter that naturally forces itself on our notice. What was the length of the Jewish cubit which was used in the construction of the Temple ? It is a point upon which a good deal has been written, but which does not appear as yet to have been solved in an absolutely conclusive manner, although several writers seem to have no doubt about the result of their investigations. After reading all I could respecting this question, it appears to me that the cubit used was that of about 18 inches. Possibly it was rather less, say 17·7 inches, but this is not certainly proved, and I have adopted a cubit of 18 inches in making the plan. A somewhat

smaller cubit would perhaps have given slightly more satisfactory results, but that of 18 inches is good enough for practical purposes, and has the advantage of easy reduction to measures that are given in feet.

Plan No. I shows the buildings of the Sanctuary as described in the books of Josephus and in the Mishna, and will, I hope, be found to agree satisfactorily with these if compared with them. To the western side of the Inner Court stood the Temple itself, built of the most substantial masonry and having its floor 6 cubits above the level of the court in front of it. These 6 cubits were made up by a foundation let into the rock so as to form a solid mass with the latter. The walls on each side of the Temple were triple, *i.e.*, an outer wall of 5 cubits, then a space of 3 cubits for the ascent which went round to the upper rooms, then a wall of 5 cubits and a mean space of 6 cubits, in which were the little chambers, followed by another wall of 6 cubits. The total thickness of the side walls of the building was therefore 25 cubits (37 feet 6 inches). The west wall was 17 cubits broad, composed of two walls 5 and 6 cubits thick respectively, with a mean space of 6 cubits between them. I say a mean space, because this space varied on each of the three stories of the small chambers, being 5 cubits on the lower story, 6 cubits on the second story, and 7 cubits on the third story.

In the centre of these walls was the Temple Chamber, 61 cubits long, 20 cubits broad, and 40 cubits high. Of this a length of 20 cubits was cut off at the west end to form the Holy of Holies, and was separated by a space of 1 cubit from the Holy Place. The little chambers have been drawn exactly as described in the Middoth.¹ They received light and air from an opening in the ceiling of each. The way to the upper chambers was by a staircase between the outer walls, as shown in the plan. Over the Temple Chamber was a large upper room of the same length, breadth, and height as the Holy Places. In front of the Temple was the porch, having a total width of 100 cubits, with a central entrance 20 cubits wide and 40 cubits high. One cannot help thinking that this porch must have greatly resembled the pylon of an Egyptian temple.

The axial line of the Temple was directed on the summit of the Mount of Olives, so that the priest who slaughtered the red heifer, on the top of that mountain, could see directly into the interior of the Temple.² This fact is of great help in enabling us to fix the direction of the Temple buildings, as I shall show hereafter.

As the foundation of the Temple was 6 cubits deep, and as the steps leading up to it were each $\frac{1}{2}$ cubit high, there were twelve steps, which were disposed in the manner indicated in the plan.

Around the Temple was the Court of the Priests, which was 176 cubits in length from west to east and 135 in width from north to south. In this court, in front of the Temple but rather to the south of the axial line, stood the Altar of Burnt Offering, erected on the site of the threshing

¹ Middoth, Chap. iv, 3, 4, 5.

² *Ibid.*, Chap. ii, 4.

floor of Araunah the Jebusite, which David purchased from him as a site for the altar of the Lord. The altar, as described in the Mishna, had a foundation 32 cubits square, but the original altar built by Solomon was only 20 cubits square. The central point of this latter altar appears to have been the guiding point in laying out the boundaries of the Sanctuary of the Mountain of the House. The limits of the Sanctuary were 500 cubits on each side, and the central point of this 500 cubits is only 1 cubit distant from the central point of the altar. But if it might be assumed that the site of the first altar occupied the position shown in dotted lines on the plan, its central point would coincide with the centre of the distance east and west across the Sanctuary. It might be expected that the line passing north and south would also be similarly divided, but it appears that the distance was made greater on the south than on the north, in order to suit the form of the ground. The actual distances from the centre of the altar, as described in the Middoth, to the borders of the Mountain of the House were :—

East	....	....	....	....	251 cubits.
South	....	....	....	....	306½ "
West	....	....	....	....	249 "
North	....	....	....	....	192½ "

But if it is assumed that the original altar of 20 cubits side stood as shown, the distance would be —

East	....	....	....	....	250 cubits.
South	....	....	....	....	300 "
West	....	....	....	....	250 "
North	....	....	....	....	200 "

This may be only a coincidence, but it is worth noticing.

To the north of the altar, in the Court of the Priests, was the place allotted for killing the sacrifices. I have omitted showing the arrangements for this, so as to make the plan clearer, and would take the opportunity of remarking that there are other details which I have also omitted, as they would take too much space to describe, and would divert attention from the general arrangement of the Temple buildings.

In the Court of the Priests, and projecting into the Court of the Israelites, were six chambers, three to the north and three to the south of the Temple; of these we have no complete dimensions, but their position and general arrangement are so clearly described that it is not difficult to place them upon the plan. They may, however, of course have been larger or smaller than I have shown them. The chambers on the north were as follows :—

The Chamber of Salt.
" " " Parvah.
" " " Washings.

And on the south were—

The Chamber of Wood, or of the High Priest, also
 called Palhedrin.
 ” ” ” the Draw Well.
 ” ” ” Gazith.

The latter was a large room where the Sanhedrin held its meetings. It had two entrances, one opening into the Court of the Priests, and the other into the Court of Israel, and its interior was partly in the former and partly in the latter, so that the members of the Council of the Sanhedrin who did not belong to the order of priests could sit in it without having to cross the boundary of the Court of the Priests.

On the east side of this court five steps with a total height of $2\frac{1}{2}$ cubits descended to the Court of Israel, which at this point was 11 cubits in width. The object of these steps is quite clear when the levels of the original ground are considered. It is evident from the description that the Court of Israel surrounded the Court of the Priests on the north and south sides as well as on the east, but what its width was on these sides is not stated, so I have made it 11 cubits, the same as on the east.

Outside the Court of Israel on the north, east, and south were the Inner Cloisters, but of these also the width is not given. But we are told that they were single, with only one row of pillars, and as the Outer Cloisters, which were double, were 30 cubits in width, I have made the Inner Cloisters 15 cubits broad. Adjoining the Court of Israel, and on each side of the eastern gate of the Inner Court, were two rooms, one, that of the keeper of the vestments, and the other that of the maker of the pancakes, which were used in the daily sacrifice.

There were seven gates to the Inner Court, of which the eastern and the three on the south were specially for the use of the people of Israel, that on the east being the main gate of the court, while the three on the north were more particularly for the priests and for the service of the Temple. According to the Mishna, the gates were each 10 cubits in breadth and 20 cubits high, while Josephus asserts that the eastern gate was larger than the others; and, after judging the probabilities, I am inclined to think that, in this particular, he is correct. First, because this was the main gate of the court, and, secondly, because if it was only 20 cubits high, it would have obscured the view between the summit of the Mount of Olives and the interior of the Temple (*see* Section No. 1). This gate, which was called Nicanor, also differed from the others, in that it had a small gate on either side of it. The gates on the south, beginning from that on the west, were called respectively—

The Gate of Kindling.
 ” ” the Firstborn.
 The Water Gate.

Flights of steps, each of ten steps, led down from these gates to the Outer Court.

The eastern gate had fifteen steps in front of it, and these were differently arranged to all the other steps of the Temple, insomuch as they were built in semi-circular form, like "half of a threshing floor." May it not have been that they were so arranged in order to keep in memory the threshing floor of Araunah the Jebusite?

The three gates on the north side of the Inner Court were somewhat different in form to those on the south. The two easterly ones, which were called Nitsus and Abtinas respectively, had large upper rooms for the use of the priests, while the third gate, called Moked, was a regular house with a large central hall, wherein the priests on duty slept, and round it four rooms, the names of which were as follows:—

North-east Room	....	The Chamber of the Stones.
South-east	..	.. Shewbread.
South-west	..	.. Lambs.
North-west	..	.. of Moked.

In the last-named room was a staircase, which led down to an underground bath room, and thence by a subterranean way out of the enclosure of the Sanctuary.

There is no account of there having been any steps outside the northern gates, and I am inclined to think there were none: first, because they were not necessary owing to the form of the ground; and, secondly, because it must have been through these gates that the animals were brought into the Inner Court for the sacrifices.

East of the Inner Court and entered from it by the Gate Nicanor, was the Court of the Women, an area of 135 cubits square. The surface was on a level of 10 cubits below the Court of the Priests, and 16 cubits below the floor of the Temple. At each of the corners was a large open court 40 cubits square which were known by the following names:—

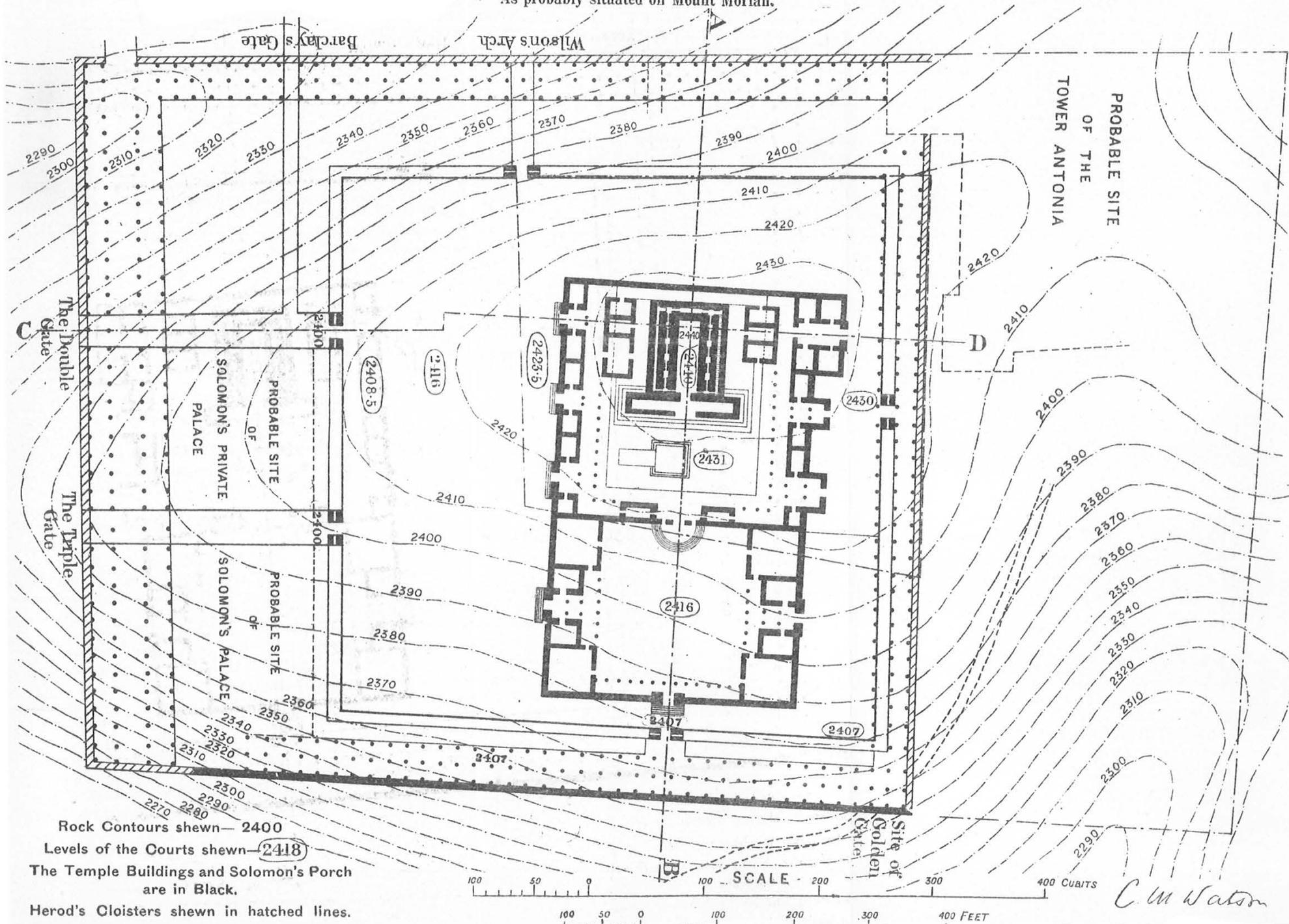
South-east Court	....	....	The Chamber of the Nazarites.
South-west	..	....	.. of Oil.
North-west	..	....	.. of the Lepers.
North-east	..	....	.. of Wood.

There were also other chambers opening into this court, and under the floor of the Court of Israel, where the Levites kept their musical instruments. These chambers were apparently made on account of the slope of the hill, to fill up to the level of the Court of Israel.

The Court of the Women had three gates: one on the east, one on the north, and one on the south, all opening on the Outer Court. The eastern gate had twelve steps, or a height of 6 cubits, leading to the Outer Court, which was therefore at a level of 22 cubits below the floor of the Temple. There were also cloisters in the Women's Court, but their position is not clearly described, so I have placed them where apparently they might have been.

TEMPLE OF JERUSALEM,

As probably situated on Mount Moriah.



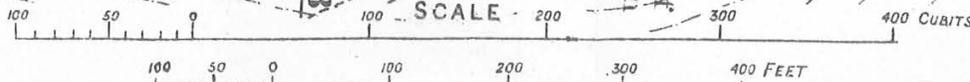
Rock Contours shewn— 2400

Levels of the Courts shewn— 2418

The Temple Buildings and Solomon's Porch are in Black.

Herod's Cloisters shewn in hatched lines.

The existing platform shewn in dotted lines.



C. M. Watson

Outside the enclosure formed by the Inner Court and the Court of the Women was the Outer Court, which had a wall round it, a little inside the boundary of the Mountain of the House. This court had five gates, as follows :—

On the east	....	....	....	The Gate Shushan.
„ south	....	....	....	„ two Huldah Gates.
„ west	....	....	....	„ Gate Kipunus.
„ north	....	....	....	„ Gate Tadi.

Of these, the Gate Shushan was directly opposite the eastern gate of the Court of the Women, but the position of the other gates is not clearly described. I have placed the two southern gates at a distance of one-third from the east and west ends of the southern boundary of the Sanctuary respectively, an arrangement which receives strong confirmation, as I shall explain later on. The west gate is not likely to have been in the centre of the west side, as it would have been opposite the blank west wall of the Inner Court, so I have placed it at the same distance from the south-west corner of the Sanctuary as the Western Huldah Gate. The position of the Northern Gate Tadi is also not stated, so I have placed it opposite the centre one of the northern gates of the Inner Court.

The arrangement of the boundary of the Sanctuary is not very clear, but as I read the description, there would appear to have been a low wall called the Soreg round the extreme boundary, upon which were fixed the notices which warned off Gentiles from the precincts of the Temple; then there was an interval of 10 cubits, and lastly, a higher wall all round between the gates. This is, however, a point open to discussion.

It is stated in the Mishna that the Mountain of the House was a square of 500 cubits on each side, and I have so drawn it. Josephus, on the contrary, states that it was a stadium, or 400 cubits, each way, but in this I think he must be in error, as if he were right many of the accurately given dimensions in the Mishna must be wrong, and also the levels as given by Josephus himself. Possibly the explanation may be that he was thinking of the distance from the Gate Shushan on the east to the western wall of the Inner Court, as this distance was 405 cubits; or he may have been speaking in a general way, just as a person might say that a certain street was a quarter of a mile long, which really measured 500 yards. But however this may be, having regard to the description given in the Mishna, to the other dimensions given by Josephus, and to the shape of the hill itself, it is impossible to accept the dimension of a stadium for the length of the side of the Sanctuary.

We have seen that the level of the Outer Court at the Gate Shushan was 16 cubits below the level of the Court of the Priests. The level at the Huldah Gate appears to have been a cubit higher, as, at this point, according to Josephus, the ground was 15 cubits lower at the border of the Mountain of the House than the level of the Inner Court, and there

were steps of 5 cubits each to adjust the level.¹ As there was a drop of 5 cubits from the southern gates to the ground outside, two other steps of 5 cubits each were necessary to complete the total height, and, on fitting the plan of the Temple to the ground, it appears that this is exactly what is required (*see* Section No. 2). The remark of Josephus about the steps of 5 cubits, though apparently rather puzzling, is really a considerable help in understanding the question.

Before discussing the Court of the Gentiles or the Outer Cloisters, it is necessary to see how the plan of the buildings of the Sanctuary, which I have very briefly described, can best be fitted to the surface of Mount Moriah as it originally appeared in the time of David, before the foundations of the Temple were laid.

Plan No. 2 shows the rock levels of the mountain as determined by the explorations of Sir C. Wilson, Sir C. Warren, and others. They may not be exactly correct, and further discoveries may probably modify them in some respects; but they cannot be very greatly in error, and are certainly sufficiently accurate for the question under discussion. Having reduced the plan of the Temple, made as already described to the same scale as that of the contoured hill, I proceeded to consider what part of the hill the Sanctuary was most likely to have occupied, and, after a careful study, arrived at the conclusion that the only way by which all the different fixed conditions of the problem could be met was by placing the Temple on the site of the present Dome of the Rock with its floor over the Sakrah. If we try to place it anywhere else in the Haram Enclosure, we are met by apparently insuperable difficulties. If, for example, we place it in the south-west corner of the Haram, as so strongly advocated by Mr. Ferguson, we find that the foundations of the Temple, so far from being 6 cubits, or 9 feet, in depth, would be over 80 feet in depth, which certainly appears difficult to credit. If we place the altar of burnt offering on the Sakrah, as some have supposed, we get the surface of the altar at a level of 2455, and consequently the floor of the Temple at 2449. But the altar being on the Sakrah, the back wall of the Temple will come over the contour 2400, and the foundation would therefore be nearly 50 feet deep. And it is the same, wherever we try to place the Temple, except in the position where its floor is over the Sakrah, and here there is no difficulty either with the plan or the levels. Here only are all the conditions satisfactorily met, and I have therefore in Plan No. 2 shown the Temple and its courts with the Holy of Holies over the Sakrah. As regards the level of the floor of the Temple, there seems no reason for supposing it was built much above the rock, and I have therefore shown it as having the level 2440. Perhaps it may savour too much of a theory, but one cannot help thinking that it is possible that the Sakrah was the Sheteyah, the rock of foundation, upon which the Ark was placed. At all events it must have been at some point near the top of the Sakrah.

¹ Josephus "Wars," Book V, Chap. v, 2.

But having thus placed the Temple over the Sakrah, we meet with the important question as to the direction of its axis. It faced the east, but whether it faced east exactly, or a little to the north or south of it, would be difficult to prove were it not for the statement repeated several times in the Mishna, which I have already alluded to, that the priest who sacrificed the red heifer on the summit of the Mount of Olives, could see over or through the eastern gates of the three courts, into the interior of the Temple itself. The axial line of the Temple and its courts I have therefore shown as directed on the highest point of the Mount of Olives. There is a remarkable confirmation of this direction for the axial line in the fact that it is at right angles to the eastern wall of the Haram, which wall, or at least its foundation, seems generally regarded as one of if not the most ancient of the enclosure walls. It was on this wall that stood the old cloister, known as Solomon's Porch, which, as Josephus tells us, was built opposite to the east wall of the Temple Enclosure. If, as some have supposed, and as appears very probable, the Palace of Solomon was at the south-west corner of the Haram Enclosure, then this cloister would be in the exact position for the royal approach from the palace to the main entrance to the Temple. Allowing a width of 30 cubits for this double cloister and a thickness of 6 cubits for its outer wall, there is left a width of 20 cubits between the cloister and the boundary of the Sanctuary.

There could not have been any special difficulty for the architects of the Temple in laying out the Inner Court, but the laying down of the quadrangle of 500 cubits could not have been so easy. It is a well-known fact in solid geometry that a right angle lying on an inclined plane, with *both* its sides at an angle with the horizontals of the plane, will be in plan greater than a right angle. Mount Moriah had steeply sloping sides, and both the south-east and south-west angles of the Mountain of the House are in the position of a right angle as mentioned above. Unless, therefore, the architect of King Solomon was provided with an instrument of the nature of a theodolite, which measures horizontal angles and vertical angles at the same time, he would not have found it easy to lay out on the ground a figure of which each side was exactly 500 cubits in length, and each angle exactly a right angle. The fact that the south-east angle of the Haram Enclosure, which was probably laid out in the time of King Solomon, is also considerably greater than a right angle, and is also on the slope of the hill, is a confirmation of the same idea.

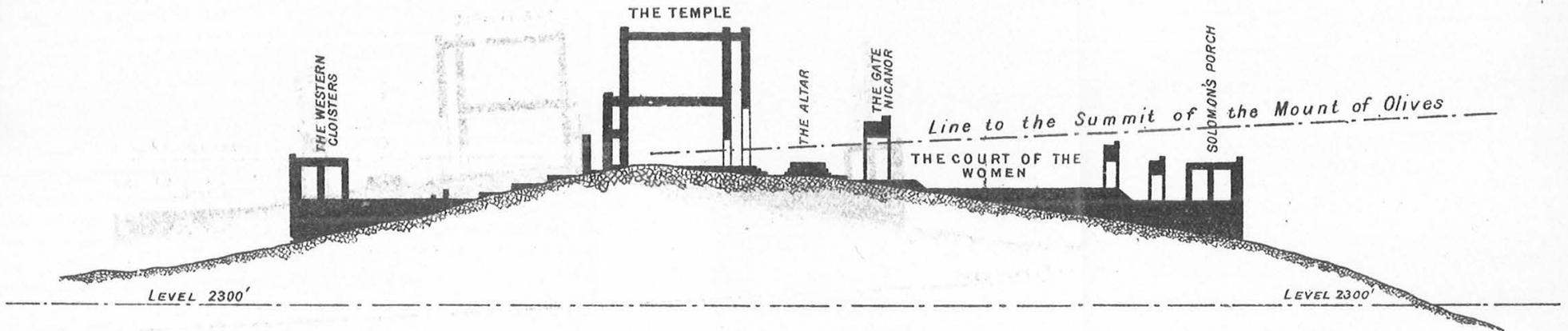
Let us consider how the Sanctuary would probably have been laid out. The centre point of the altar was probably fixed first, and then the axial line of the Temple passing through the highest point of the hill, and the highest point of the Mount of Olives was traced upon the ground. A line parallel to this, drawn through that fixed for the centre point of the altar, would give the centre line, and marks made upon this, one 250 cubits to the east and the other 250 cubits to the west, would fix the boundary of the Sanctuary in these directions. A line at right angles to

the first would also have the distances marked on it, 300 cubits to the south and 200 cubits to the north. It might be asked why these were not also made 250 cubits each. I am inclined to think that this was done to suit the shape of the hill (*see* Plan No. 2), and it is possible that there may have been an old road coming up from the valley of the Kedron, and passing by the point (afterwards occupied by the Golden Gate), over the hill to the north of the Sakrah, which it was desired to have uninterrupted. I have shown the possible positions of this road in dotted lines on Plan No. 2. The next step would have been to set off a perpendicular at the east end of the central line, and from a point on this line about 300 cubits to the south, to set off a right angle to the south point already fixed. But this angle would, as I have already shown, be in plan slightly obtuse. Proceeding in a similar manner, the rest of the boundary of the Sanctuary would have been laid, and must have been somewhat as I have shown in Plate 2. I do not say it is exactly correct, but it is the best way in which I can lay a quadrangle on the steep ground, of which the sides are approximately 500 cubits in length, and the angles as nearly as possible right angles, *on the ground*. The gates of the Mountain of the House are placed as already described.

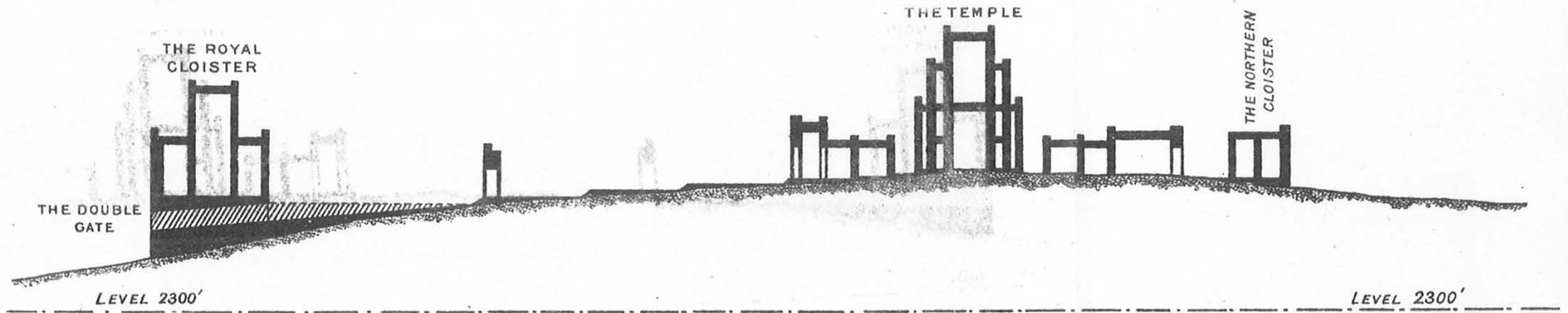
Having thus shown how the buildings of the Sanctuary might have been disposed on Mount Moriah, the next step is to see what their position would be with reference to the existing walls of the Haram Enclosure. The probable restoration I have also shown on Plan No. 2, whereon the Outer Cloisters, added by King Herod, are drawn in hatched lines. It will be seen that the two Huldah gates on the south side of the Sanctuary come just opposite to the passages leading from the Double and Treble gates in the south wall of the Haram, while Barclay's gate, on the west side of the latter, leads up to the road from the west Huldah gate, *outside* the Mountain of the House. Wilson's arch, which is most probably on the site of an old road leading to the Temple Enclosure, is opposite to the western gate of the latter. The Golden Gate, with its double entrance, comes just opposite to the north-east corner of the Sanctuary, and there is room for a road to lead down to it from the east gate of the latter, between it and Solomon's Porch. It seems to me possible that the double entrance at the Golden Gate is a traditional restoration of the original gate built by Solomon, of which the south door would have served the use of the Temple, and have been that by which the red heifer was taken out to the Mount of Olives, while the north portal was that used by people coming up from the Valley of Kedron and proceeding north of the Temple Enclosure towards the west. In this case the Cloister of Solomon's Porch would have passed over the top of the gate.

As I have already stated, the probable position of Solomon's Palace was at the south-east corner of the Haram, and it would have occupied the square space of 200 cubits side, bounded by the south and east walls of the Haram, by the road from the Triple Gate on the west, and on the north by the road leading round the Sanctuary outside. That such a

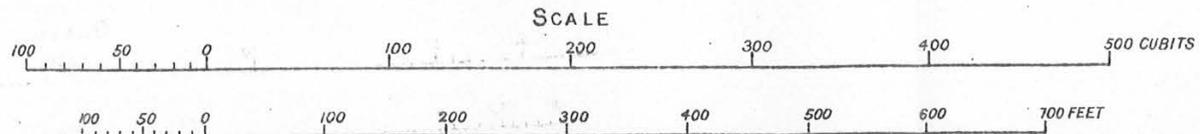
SECTIONS



N° 1 SECTION ON A. B. WEST TO EAST.



N° 2. SECTION C. D. SOUTH TO NORTH.



road existed is clear from the statement in the Mishna, that the Sanctuary was not to be used as a short cut, and that persons, who did not come to worship, were to go round it outside.

The space of 200 cubits by 150 cubits between the Treble and Double Gates, may have been occupied by the private apartments and harem of King Solomon, separated from the House of the Forest of Lebanon, his official residence, by the road from the Treble Gate; the latter, or, of course, an old gate on the site, being the public entrance to the palace. If this theory is correct, the great course on the south wall may be the base of the palaces of Solomon.

The roadway from the Treble Gate to the Sanctuary starts on the ground level, but the rock under the Double Gate is about 30 feet lower, so that at some period the ground outside must have been brought up to the level of this gate. Perhaps the outer surface from the Double as far as the Single Gate may have been levelled up when the palaces of Solomon were built. We have no information as to the state of the ground at the south-east angle at the time when Herod built the Royal Cloister on the south wall, but it seems probable that it was at that period that the roadways leading up to the Sanctuary from the Double and Treble Gates were roofed in. It was possibly at the same period that the west wall and Western Cloister were built, and then the road leading up from Barclay's Gate had also to be covered over. I have shown the Royal Cloister as continuous up to the south-east corner of the Haram, but it is possible that it stopped at the Triple Gate. This point is uncertain.

The Western Cloister was built from the south-west corner to the Tower of Antonia. According to the account in Josephus there were four gates leading to the enclosure on this side.¹ Of these, one was doubtless the great flight of steps leading up to the west end of the Royal Cloister, and one the causeway leading up to and passing under the West Cloister at Barclay's Gate. Another entrance was at the point where Wilson's arch now is, which probably led from the Royal Palace in the City of Jerusalem. The question of the structure and levels of the gate at this point is a very interesting one, but is too long to discuss here. It may have been over or in front of this gate that John, the defender of the Temple against Titus, built the tower alluded to in Josephus's account of the Siege of Jerusalem. The position of the fourth west gate of Josephus is uncertain, but it also may have been a passage under the West Cloister, similar to that at Barclay's Gate, and at the point where Cistern No. 30 was discovered. This I have shown in dotted lines. The position of the fourth gate is, however, doubtful.

The North Cloister encroached upon the north boundary of the Mountain of the House, the wall of which had to be taken down to build it. Its face probably was on the same line as the north wall of the platform of the Dome of the Rock. When the cloister was built,

¹ Josephus "Ant.," Book XV, Chap. xi, 5.

the Gate Tadi, the north gate of the Sanctuary, appears to have been closed and replaced by an underground passage passing under the cloisters, and represented at the present time by Cistern No. 1. The Northern Cloister, like the Western, ended at the Tower of Antonia, the probable approximate position of which I have marked in dotted lines. There is a statement in Josephus which appears to confirm this proposed restoration of the Temple, as he mentions that the addition of the Outer Cloisters doubled the area of the Temple Enclosure.¹ Now the area, as enclosed by the four Outer Cloisters as shown on Plan No. 2, is rather more than 480,000 square cubits, and the area of the Sanctuary was 250,000 square cubits; so that the one, speaking roughly, is just double of the other.

In the sections, I have shown the manner in which the Temple buildings, with the levels given in Josephus and the Mishna, compare with the rock levels, as determined by exploration. These sections will explain, better than any verbal description, how well the one corresponds to the other, if the site of the Temple on Mount Moriah, which I have suggested, is accepted. I would add that in this paper I have treated the subject in a general manner only, as to enter into all the details which had to be considered in preparing the plans would make it a great deal too long. As I have stated before, my effort has been to prepare plans, which would be in accord with the historical documents, and also with what exploration has shown to be the actual facts.

THE SYRIAN LANGUAGE.

By Lieut.-Colonel C. R. CONDER, R.E., D.C.L., &c.

IN Hezekiah's time the Syrian or Aramean language differed from Hebrew (2 Kings xviii, 26); and the discoveries due to the German explorations of 1888-91, which have just been published, cast a remarkable light on this subject. The site excavated, now Sinjirli, is the ancient Samâla, situated east of Issus, on the highway from Carchemish to the Gulf of Alexandretta, and north-west of Aleppo, in the extreme north of Syria. The old name itself appears to mean "the north," and often occurs in Assyrian texts. Here, in addition to a magnificent stela of Esarhaddon holding captive the King of Egypt and another prisoner, were discovered statues of basalt covered with inscriptions in the Phœnician alphabet, the letters cut in relief. Of these the earliest appears to date about 800 B.C., and another about 730 B.C.; and the forms of the older letters are very closely those of the Moabite stone. The contents are of historic value; and the language—which approaches the Moabite, Phœnician, and early Aramaic rather than the Hebrew—is of great interest. The later text

¹ Josephus "Wars," Book I, Chap. xxi, 1.