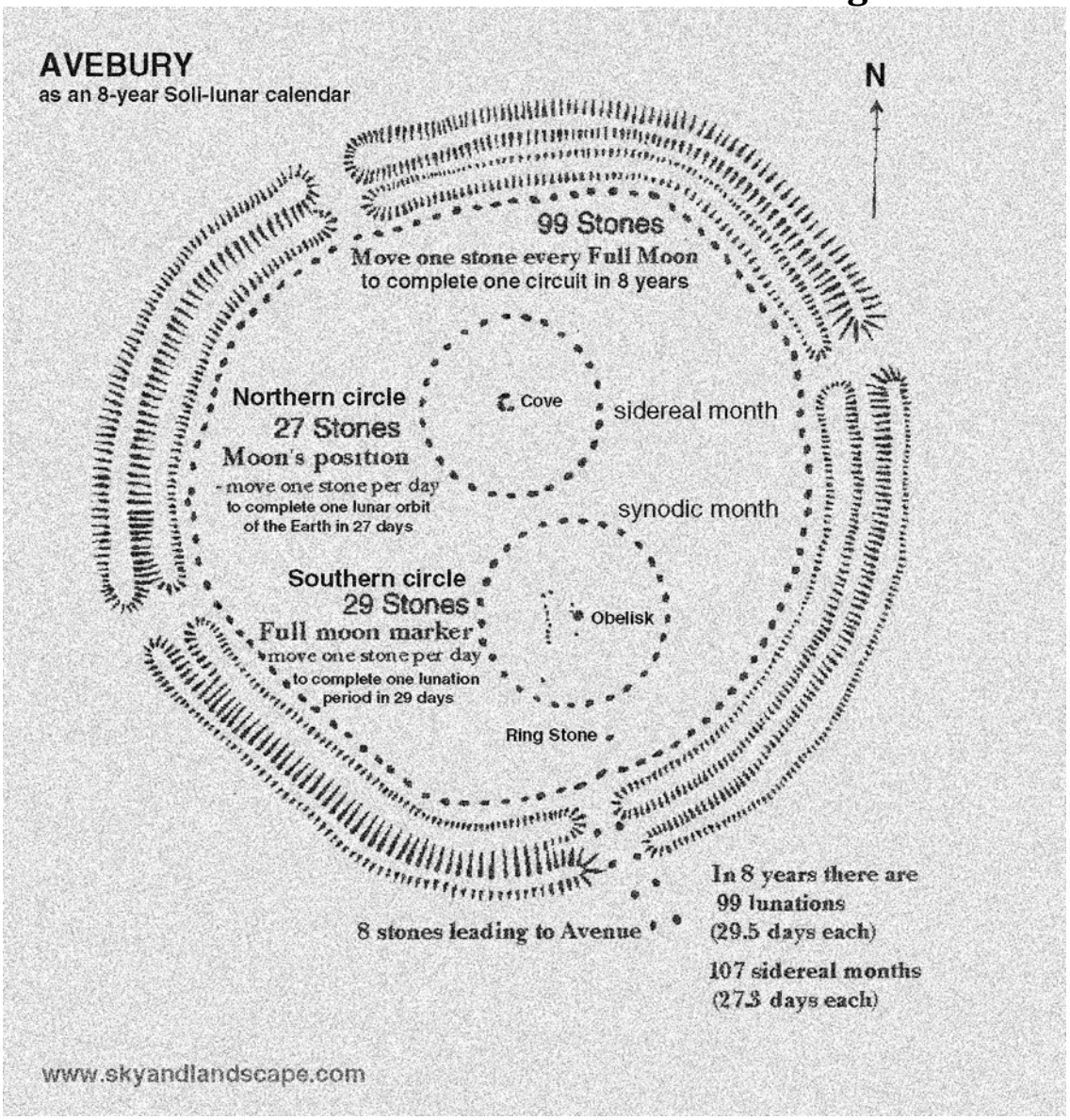
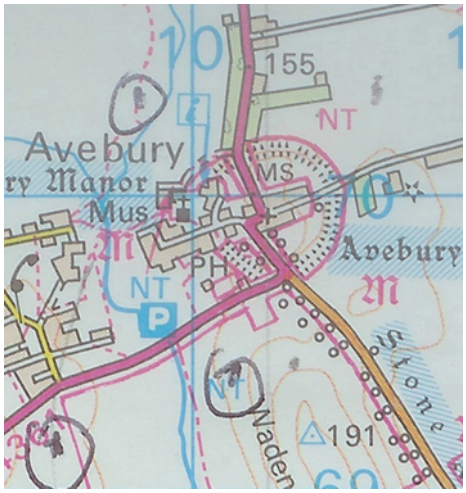
# AVEBURY TOUR with ROBIN HEATH 23rd August 2017

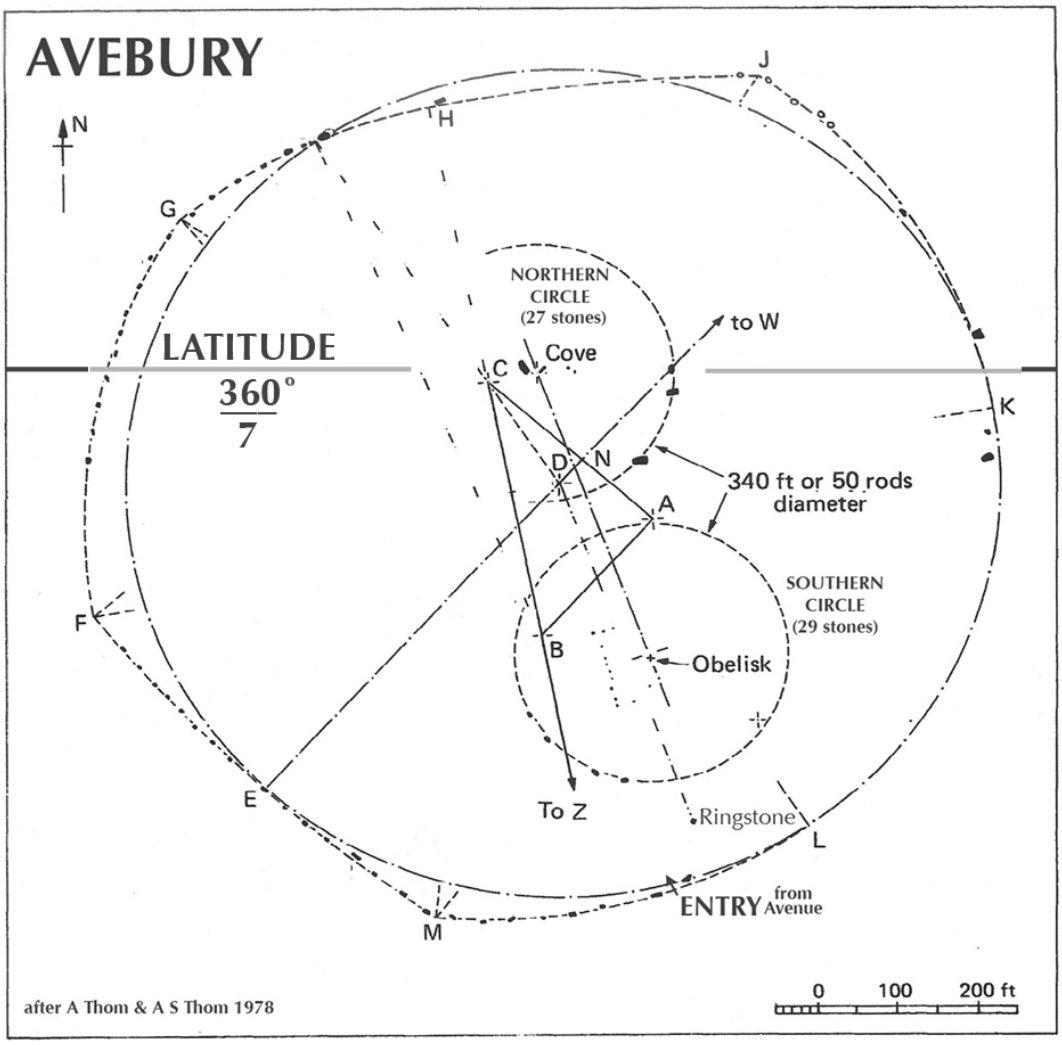


**AVEBURY TOUR by Robin Heath, Faculty of Astrological Studies**
**Oxford Summer School, August 2017**

## Some Interesting Factoids

1. Avebury is the largest known stone circle anywhere.
2. The surrounding ditch and bank is 2/3rds mile in circumference.
3. The most accurate survey was undertaken between by Professor Alexander Thom in 1978.
4. Thom reported that the perimeter of the outer stone ring was 1302.5 Megalithic yards (MY) of 2.722 feet, which is 3545.4 feet or 520 Megalithic rods ( 1 MR = 2.5 MY).
5. The geometry of the ring is based on a circle 200MY in radius (544feet/ 1.66m) with centre at point D, exactly 60 MY from C (see diagram opposite).
6. A 3-4-5 pythagorean triangle ABC of side lengths 30-40-50 MR (75, 100 and 125 MY) defined the geometry. From the corners of this triangle (stones/markers have long gone) the various arcs that make up the outer ring were struck.
Their radii and arc lengths are as follows:
From A,B and C, each radius 260 MY, define arc FG, length 200 MY, arc HG, length 130 MY, and arc ML, length 200 MY respectively. In addition, there were two longer arcs struck from outside of the ring of length 750 MY, from point W and Z (not shown on diagram).
7. The two inner circles are each 125 MY in radius and are therefore as big as any other true circle known in Britain, and the same size as the massive Ring of Brogar in the Orkneys.
8. Avebury, unlike nearly all other stone rings, has CORNERS, which define the arc lengths. Thom showed that all the arc lengths are integral in Megalithic rods.
9. Avebury is a MESS. The ring was heavily vandalised in history, has a village built within and without it, and a major road system has quartered it (see map on p 1, lower right). Most of the stones were fallen or missing in 1930. Despite this, Alexander Keiller and other archaeologists were able to locate the majority of the stone holes in the chalk and the geometry of the original ring has since been established by AlexanderThom, by precision theodolite surveys.
10. When built the outer stone ring contained either 98 or 99 stones, some weighing over 50 tons.

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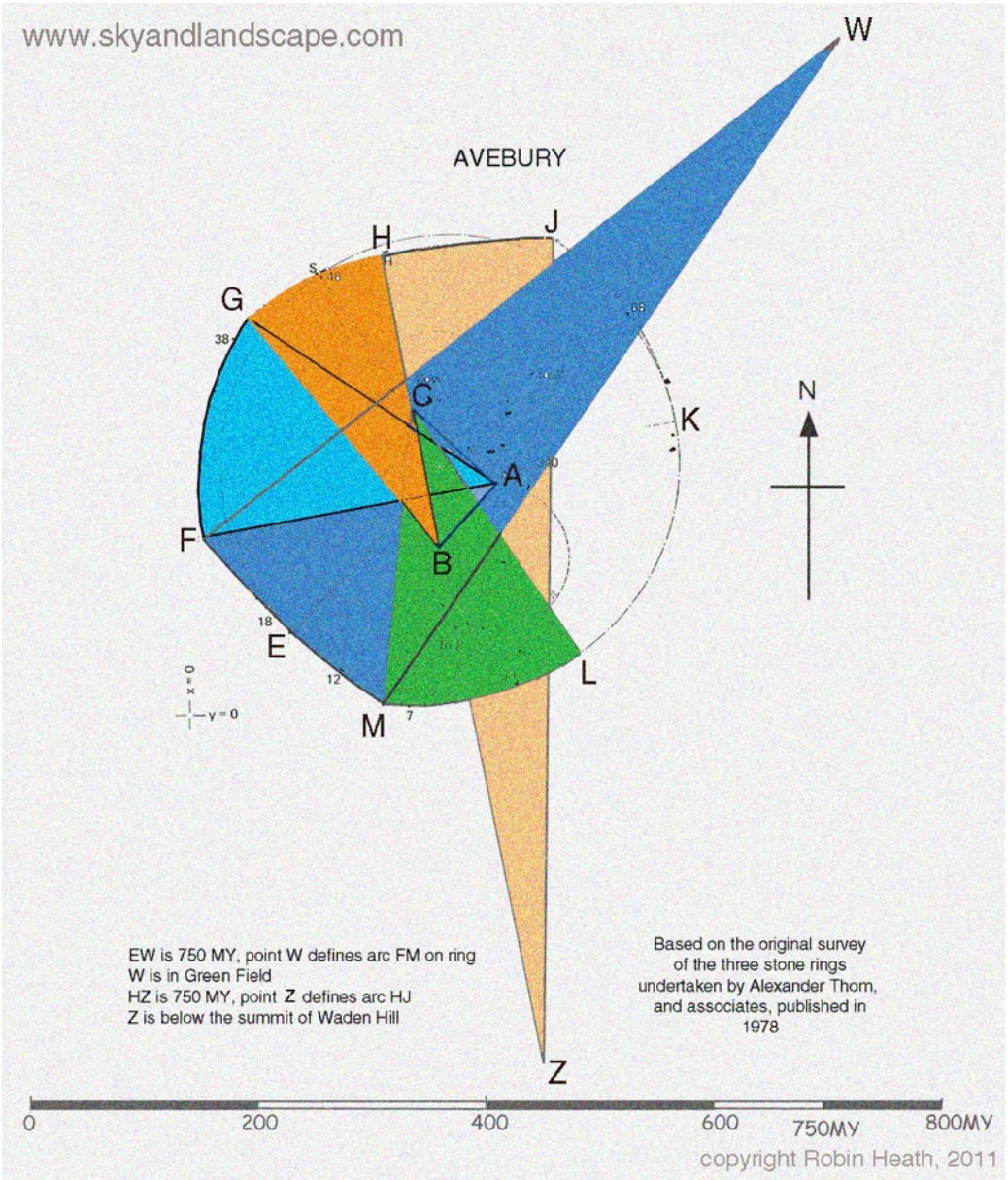


## NEW RESEARCH FINDINGS ON THE IMPLIED ASTRONOMY OF AVEBURY

The obvious first question to ask about Avebury ring is why go to all this trouble, when a circle would apparently have done the job of impressing everyone just as well? Thom's survey established that the geometry and units of length were extremely well thought out and accurately executed on the ground. The shape was an intentional and highly geometrical design.
Earlier work revealed other interesting facts. For a start the latitude 360/7 degrees passes through the monument, just south of the Cove, making Avebury 3/7ths of the distance between the equator and the pole.

The 3-4-5- triangle ABC (above) that Thom discovered to have been used to lay out the shape of the ring is here revealed for the first time as carrying an astronomical meaning. It orients its two smaller sides - the ones that contain the right angle - towards the midsummer sunset (along side AC) and the major standstill moonrise in the North (along BA).

Around the latitude of Avebury and Stonehenge, these two astronomical events occur almost at right angles to each other, and a little careful selection of the horizon elevation angles near an intended site can find a unique location (like at Stonehenge and Avebury) where they do exactly form a right angle. Using the 3-4-5- triangle ABC upon which the entire geometry of Avebury ring is based, the projection of the side AC meets the summit of Windmill Hill, where the elevated horizon coincided with the angle of the Midsummer solstice sunset around

3000 BC. The almost flat horizon of the eastern side of Avebury, defined by the Ridgeway, coincided with the major moonrise in the North looking from B along side BA of the triangle. This is new and exciting information about Avebury, and you heard about it here first.

What might it mean? The obvious and sad fact is that the archaeology profession has not connected with Avebury concerning its astronomy, geometry and metrology. This means that an important advance in our understanding of the monument has been placed on the table from outside the very profession that could have embraced Thom's work four decades ago.
The next phase of my own researches will be to refine this astronomical information to attempt a more accurate dating as to when the main ring was laid out, using the astronomical properties of this triangle. Because the earth's tilt gradually changes over centuries, this affects the angles of the sun and moon as they rise and set. Using a theodolite these angles can be accurately measured and calculations done to suggest a range of dates for the ring having been laid out.
In western Europe there are many sites where one can discover geometrical layouts based on the 3-4-5 and other pythagorean triangles, often in units of 10 MY. There are many as too, commonly, is the use of the megalithic yard at megalithic sites.

**THE WEST KENNET AVENUE**

The surviving Avenue to West Kennet is a real puzzle and richochets across the field that borders Waden Hill. From the Sanctuary up on the Ridgeway, a processional walkway led down into the Avebury ring, entering into the ring through the huge flanking stones at the southern side and near the bend in the main road to Devizes and Marlborough. The first 2400 feet of this walkway has not yet been excavated(why not?), but the final part has been.

Two parallel doglegs, some 18MY apart wander across the field, with stones that vary greatly in shape, from the 'female' plump and rounded ones, to the 'male' squarer and more phallic ones. Keiller found most of these recumbent, buried or missing and pulled aside, and he related that he probably did not place all of them in their original sockets in the chalk.

Parts of Avebury provide very peaceful places to spend some time away from the bustle and constant traffic noise of the village of Avebury itself. Particularly, sitting under the Beech trees presently rooted in the bank to the north-east of the henge, one may glean something of the sanctity of this astonishing place. Both Avebury and Stonehenge have been immensely diminished by the effects of the modern world, though at Avebury things are much better for pondering over your tiny place within the enormous backdrop of time.

# THE COVE

In the middle of the northern circle, just across the road from the Red Lion pub, huge stones define what is known as a Cove. Open to the extreme northerly rise of the moon each month, it was recently repaired and made safe, after a period of seriously worrying health and safety officials. And we can't be having that, now, can we? The photo (below) was taken in the rain in the morning the right hand stone was straightened, and within two hours of the scaffolding being taken down by local contractors Ellis and Son. I was there!

**AVEBURY AS AN EIGHT-YEAR SOLI-LUNAR CALENDAR**

The inner circles at Avebury were constructed like this: The Northern circle, now largely gone, once contained 27 large megaliths equally spaced around its perimeter, while the Southern circle contained 29. This is quite hard to achieve today, and why would one choose such odd numbers? One speculation would be to identify the 27 stones with the circle made by the moon around the sky each and every 27.32 days, the sidereal month, while the 29 perhaps represented the circle of its phases (lunation period or synodic month), which takes 29.53 days to complete.
The outer ring once had has 99 stones (some say 98).
The two circles could function well - even today - as a clock of the moon's two major rhythms. Were two markers to be moved around by one stone a day, then eventually their original positions would return. After how long? After three calendar (solar) years, they'd be very close to their original positions, after eight years really close, and after nineteen years they would truly coincide.
It is the eight year cycle that is so interesting at Avebury, because almost exactly 99 full moons take place in 8 years, and this sun-moon repeat cycle finds the luminaries in exactly their starting positions, with Venus joining in the synchrony! The 27, 29 and 99 stones of the three main circles at Avebury provide *all* the numerical information to suggest strongly that the monument could have been used as an 8 year calendar. If the counting tally is set up as described when the sun sets while the crescent Moon and Venus are setting in the twilight (resembling a Muslim flag), then eight years later that same set-up will occur, within a day of the same date at start. The Minoan and early Jewish calendars were both based on this same 8 year cycle. Avebury's design suggests that this idea was being applied in prehistoric Britain - 5000 years ago. These numerical links add to the geometrical and metrological information to provide IDEAS on the purpose of Avebury ring. This in no way detracts or distracts from present archaeological evidence obtained from official academic sources, nor the delight in experiencing the Avebury Landscape, but it could and hopefully one day will add enormously to our knowledge of the megalithic builders of this site.

**Recommended Reading**

*Avebury* by Evelyn Francis (Wooden Books)
*Alexander Thom: Cracking the Stone Age Code* by Robin Heath (Bluestone Press, 2007)
*The Lost Science of Measuring the World* by John Michell & Robin Heath (AUP, 2004)
Books by Nicholas Mann, Michael Dames and Aubrey Burl are also highly recommended
PDF file supplied to interested parties FOC

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