

The Stonehenge Survival Guide

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of

Stonehenge Facts Quick and Easy!
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The Stonehenge Survival Guide

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The Stonehenge Survival Guide

Table of Contents

<u>Page</u>	<u>Section</u>
04	Introduction
07	Construction Phases
14	Who Built Stonehenge
16	Who Investigated Stonehenge
18	Stonehenge Legends and Myths
20	Stonehenge & the Science of Archaeoastronomy
23	Other Stone Structures
25	Tourist Information
30	eBook Bonus Details
31	In Closing

The Stonehenge Survival Guide

Introduction

- [About the Author](#)

I am not sure when it really started, but I have always been interested in Stonehenge. When I was a child, we lived in Germany and had the opportunity to visit England. We went to a Henge but weren't lucky enough to be able to visit the wonderful stone ring of Stonehenge.

I really regret it because back then you were able to walk among the stones and be a part of their glory. Today, you are just a spectator marveling at their majesty. Much later in life, since I missed out on the "in person" experience, I decided to learn as much as I could about Stonehenge.

In 1994 I took what I knew, put it up on a web page, and hoped to educate the world on how wonderful Stonehenge was. I certainly wasn't an expert by any means, and certainly am not one now, but back then there was no real information out there on the Internet related to Stonehenge.

Stonehenge - Gateway to the Realms went live on June 4th, 1994. It started out as a very simple site, but slowly I continued to work on it throughout the years. This original site of mine was located off my Earthlink internet account (<http://home.earthlink.net/~shadowfax/>) and interestingly enough, still brings many visitors to my newest site even though it was abandoned a long time ago.

Over the years there have been many variations and many names, but the site still continued to become even more popular. I am happy to say that I as far as I can tell, I am the oldest Stonehenge site on the Internet and have helped over 3 million students, teachers, and the curious person learn about Stonehenge.

Finally, I recently moved my Stonehenge site from its location at my domain (<http://www.christiaan.com/stonehenge/>) to it's new permanent home at AboutStonehenge.Info (<http://www.aboutstonehenge.info/>)

The Stonehenge Survival Guide

Here I hoped to make a “one stop Stonehenge spot” type web site. So far things have been going good but it is much harder getting links and traffic than I had hoped. There are many sites on Stonehenge now and most aren't even updated on a regular basis like mine. If you want to increase the knowledge of Stonehenge, please tell others about my new Stonehenge site!

- ***How This eBook Came About***

I have received hundreds of Stonehenge questions from people hoping to answer something that was not covered or information that wasn't easily found on any part of the Internet. These people needed some sort of service or place that would be their one stop Stonehenge spot.

I tried to provide all the details within my site that I could but it isn't easy keeping a web site up to date when it isn't your full time job. Technology has increased over the past few years, the Internet has grown, and it is much easier to pass information around. Something new that is taking the Internet by storm is PDF files and eBooks. They are the future of information distribution on the Internet.

(For more information regarding how you can turn your knowledge into an eBook that could make money, please see another web site of mine located at: <http://www.onlinebusinesshelp.info/>)

I felt that I should leverage this eBook technology to further my web page and its Stonehenge information. The result was....

The Stonehenge Survival Guide

This eBook is designed to bring the basics of Stonehenge together in one resource. It helps everyone understand Stonehenge and its contribution to our society and the world. I attempt to cover information regarding Stonehenge that will help Students, Teachers, and the average Stonehenge visitor.

The Stonehenge Survival Guide

It is no complete resource by any means, and wasn't designed to be, but it provides a solid basis of Stonehenge information allowing people to quickly get to the "meat" on Stonehenge. Also, over time I will continue to update its information as needed.

I hope you enjoy my eBook and find the information contained in it useful. Please take a few minutes and fill out my survey with your thoughts on the eBook!

<http://www.christiaan.com/stonehenge/survey/>

Sincerely,

Christiaan Stoudt

<http://www.christiaan.com/stonehenge/>

Stonehenge facts quick and easy!

The Stonehenge Survival Guide

Construction Phases

Stonehenge, the most visited and well known of the British stone rings, is a composite structure built during three distinct periods. Each of the phases or periods can be fixed to about 100 years or so with radiocarbon dating, but as to the exact building sequence within each period Archaeologists can't be certain.

- Period I - dated to around 3100 B.C.
- Period II - dated to around 2100 B.C.
- Period III - dated to around 2000 B.C.

Definition: Radiocarbon Dating

All living things contain carbon which is one of the essential building blocks of life. Once death occurs, decay sets in and it is this decay that is basically being measured. A radioactive isotope or atom known as "Carbon 14 (C14)" is absorbed by all living things and decays in a long and measurable way. The technique of radiocarbon dating therefore measures the amount of C14 within the object: the smaller the amount, the older the object. Dates may thus be assigned with a fair degree of accuracy.

When the method was first developed in the 1940's it was assumed that the carbon isotope decayed at a constant rate. In reality, it appears that the difference between "true" dates and uncorrected radiocarbon dates maybe considerable, even as much as a thousand years' discrepancy in the Mesolithic.

- *Period I*

The oldest structure of Stonehenge are the banks, ditch, and pits known as Aubrey Holes. These components make up the first period of Stonehenge which was basically a circular enclosure outlined by two banks and a ditch with an entrance to the northeast and a standing stone a bit away from the entrance.

The Stonehenge Survival Guide

The outer circle was made from earth and even though it is now mostly destroyed, it was about 380 feet in diameter, 8 feet wide, and 2 or 3 feet high.

The ditch (more like pits) wasn't uniform in shape or depth and it varied in width from 10 - 20 feet and a depth of 4.5 - 7 feet. Not much effort was taken in keeping the ditch clean. Archaeologists have been able to use the varied fragments (picks made of red deer antlers, scoops made of oxen shoulder blades, and some pottery fragments) found near the bottom of the ditch to help date its construction.

The date lead to the Neolithic period when the first farmers and animal herders appear, with assemblages that usually include pottery and polished stone axes. In Britain, the Neolithic period starts about 7,000 years ago, lasting until the start of the Bronze Age about 4,000 years ago.

Next was the chalkwork inner bank of Stonehenge. It was an impressive sight standing at least 6 feet high, about 20 feet wide and had a diameter of 320 feet. It was composed of the solid chalk that makes up most of the surface region around Stonehenge.

An interesting fact to note is that all of the other Stonehenge type monuments have their bigger encircling banks outside of the quarry ditches; yet Stonehenge has its bigger bank within the ditch. No one has been able to figure out why Stonehenge was done like this.

The ditch and bank are what make the "henge" at Stonehenge. A common mistake is to refer to any stone circle site as a henge. A henge is an earthwork monument constructed in Neolithic Britain. Some henges might have contained timber posts or settings of stones at the centre, but by no means did they all. There is no available evidence for timber or stone having been erected at the center of Stonehenge during this phase due to the amount of damage caused at the site by people digging for "treasure" in the center.

From the center of the circle facing northeast is the entrance into Stonehenge. It is about 35 feet wide and is set so that a person standing in the center of Stonehenge can see the sun rise on midsummer morning just to the left of the heel stone.

The Stonehenge Survival Guide

The naturally shaped heel stone is about 20 feet long and 8 feet wide by 7 feet thick. Its lower 4 feet is buried in the ground and it weighs an estimated 35 tons. It is made up of natural sandstone called sarsen which are thought to have come from Marlborough Downs, 20 miles to the north of Stonehenge.

Currently the heel stone leans inward toward the circle at an angle of about 30 degrees from the perpendicular, but it is believed that the stone was once standing straight. Circling the stone about 12 feet from its base is a covered ditch filled with chalk.

Inside the circle are 56 Aubrey holes (named after their 17th century discoverer John Aubrey) that vary from 2.5 - 6 feet in width, and 2 - 4 feet in depth. They were spaced quite accurately in a 288 foot diameter circle with an average center point for each hole of 19 inches (+/- an inch or two).

Probably also dating to this time are the four Station Stones (only two survive today) which stand approximately on the circle of Aubrey holes. They formed a rectangle perpendicular to the midsummer sunrise line of the monument.

Of the two still standing, one is naturally shaped while the other is slightly tooled. There is some contention among archaeologists as to when the Station Stones were placed at Stonehenge but general consensus is during period I.

- *Period II*

It is unclear how long the first period of Stonehenge was in use before being altered. Archaeologists aren't sure what exactly was done during the second period but it is believed that the Beaker people were responsible for the second wave of building at Stonehenge.

Period II saw the replacement of the wooden sanctuary with two circles (60 total) of "bluestones" (a dolerite stone with a bluish tint), the widening of the entrance, the construction of an entrance avenue marked by parallel ditches aligned to the midsummer sunrise, and the erection, outside the circle, of the thirty-five ton "Heel Stone."

The Stonehenge Survival Guide

The Heel Stone, stands within its own ditch at the north-east entrance from the Avenue, is the most prominent. The Heel Stone is a large upright un-worked sarsen. The Heel Stone was once wrongly thought to be named after the Greek Helios or Sun. It was originally christened “Friar’s Heel” after the indentation in the stone that was thought to represent a shoe mark - said to be the results of a friar’s unsuccessful altercation with the devil. In earlier centuries however, a different stone was identified as the one with the heel mark.

Some feel that bluestones from the Preseli Mountains (240 miles away) in west Wales were brought in, while others are very intrigued by the post-holes found scattered about the monument. Even though the post-holes appear to be spaced randomly, there are some clusters and patterns that do show up. By no means are these clusters like those of nearby Woodhenge, but they do make us think twice about what might have been happening at Stonehenge during the second period.

If you decide to follow this belief that the post-holes were used to create a structure, the easiest clusters to note are the ones in the northeastern entrance. They form a series of holes that could have been used to create wooden walls that maybe made a narrow triple entrance into Stonehenge.

Recently Archaeologists have identified the remains of a palisade that ran to the west and north of Stonehenge. Palisade fences have been found in other places of a similar Late Neolithic date. It is possible that the palisade was used to form a sacred space since it didn’t enclose Stonehenge but instead just created a wall blocking it from view.

Cremation burials have been found cut into the filled in ditch and in the monument’s interior (Aubrey Holes). Imagine the honor of being placed in such a sacred structure as Stonehenge so you can rest at peace for all time. A majority of the cremations were determined to be from the Late Neolithic/Early Bronze Age due to radiocarbon dating of the bone skewer pins used to hold the bags, in which the ashes were placed, closed.

Lastly, Stonehenge’s old ditch bank entrance was widened another 25 feet and a 40 foot (12 meters) wide ‘Avenue’ lined by parallel banks and ditches 47 feet apart extended out from it. Even though it is hard to see now, the Avenue originally went northeast from Stonehenge and slowly curved right for 2 miles to the river Avon.

The Stonehenge Survival Guide

- **Period III**

Stonehenge's third period was the longest and contained the most changes of all the periods. The original three subphase scheme of period three was drawn up by Professor Richard Atkinson who was the leading investigator of Stonehenge in the 1950s and 1960s.

Archaeologists don't fully agree on how many different 'subphases' there were during this period and recently they feel that there were no fewer than six. Unfortunately we may never know the exact amount of subphases, but certainly this period was the busiest of them all.

Subphase A – period III

General consensus is the first erected stones were those of the bluestones. They were set up in two concentric circles made of at least 82 bluestone Menhirs (large, rough-hewn standing stones). These stones weighed about 5 tons each and were 6 feet apart - 35 feet from the center. Supposedly the bluestone came from the Preseli Mountains in southwestern Wales. It is also felt that the Altar Stone was placed during this subphase.

Subphase B - period III

About 100 years later the bluestones were dismantled and the Stonehenge as we see it today started to show. A 100 foot diameter circle of 30 sarsen-stone (weighing up to 50 tons each and only 17 are now standing) uprights capped by a continuous ring of sarsen lintels was erected in the center of the site.

The stones are evenly spaced approximately 1 to 1.4 meters apart, and stand on average 13 feet (4 meters) above the ground. They are about 6.5 feet (2 meters) wide and 3 feet (1 meter) thick and taper towards the top.

Each lintel was part of a continuous circle at a height of around 16 feet from the ground and was shaped to the curve of the circle. The average length of the rectangular lintels is about 10.6 feet (3.2 meters). The lintels were fitted end-to-end using tongue-and-groove joints.

The Stonehenge Survival Guide

Definition: Sarsen stone

Sarsen is a very hard form of sandstone found particularly on the Marlborough Downs some 18 miles to the north. This is the same source of stone used for the construction of the circles at Avebury.

The sarsen circle with its lintels is perhaps the most remarkable feature of Stonehenge in terms of design, precision stonework, and engineering.

This circle surrounded a horseshoe-shaped setting of five sarsen trilithons (a Greek word that means three stones) with its open side facing northeast towards the main entrance of the monument. Although now fragmentary, the arrangement shows the careful grading of the five trilithons, the tallest of which is 22 feet (6.7 meters) high above ground level. The tallest is in the central position and only three of the five trilithons are now standing complete with their lintels. The other two both have only one standing stone with the second stone and lintel lying on the ground. In front of them can be seen two of the upright bluestones, which originally formed an oval inside the horseshoe of trilithons.

No other megalithic structure in northwestern Europe displays the precision and architectural refinement that Stonehenge does.

Subphase C & D - period III

Some of the bluestones were shaped, dressed, and then reerected in an oval structure within the center of the sarsen horseshoe. It is also believed that if the Altar Stone wasn't placed in subphase A, then it was probably installed in its present position at this time. An additional circle of bluestones was set up within the outer sarsen circle.

Subphase E - period III

Right around 1900 or 1800 BC Stonehenge was almost complete as we see it today. The now-fallen Altar Stone was the focal point of two circles of sarsen and bluestones and two horseshoes of sarsen and bluestones. It is believed the inner bluestone oval was rearranged to form the second smaller horseshoe within the great trilithons.

The Stonehenge Survival Guide

Subphase F - period III

The completing phase was two concentric rings of pits about 20 feet (6 meters) apart and dug around the outside of the stones. Lt-Col Hawley discovered them in 1923 and called them Y and Z Holes (he considered the Aubrey Holes to be the X holes). It is possible that these holes were dug to take yet another setting of stones but for whatever reason this phase was never carried out.

Materials found in the holes are dated to various times up to the medieval period but also include Bronze Age items. Stag antlers that were deliberately placed at the bottom of one Y hole has been carbon dated to around 1600 BC right at the end of Stonehenge's life.

Lying within the entrance is an un-worked and now recumbent sarsen stone, stained a rusty red caused by rainwater acting on iron, and known as the "Slaughter Stone." They believe that the Slaughter stone originally stood upright but people think that in the late eighteenth century it was connected with the idea of sacrifice and has probably been laying flat in the ground for a century or so.

Gerald Hawkins raises a wonderful idea that these holes were used to make Stonehenge a calendar for astronomical events. See his book Stonehenge Decoded for more information.

Recommended Reading:

Stonehenge Decoded by Gerald Hawkins

The author was a Professor of Astronomy who concluded that Stonehenge was a sophisticated astronomical observatory designed to predict eclipses. The author, and other astronomers, discovered the 56-year cycle of eclipses by decoding Stonehenge!

[Purchase now from Amazon.Com](http://www.amazon.com/Stonehenge-Decoded-Gerald-Hawkins/)

The Stonehenge Survival Guide

Who Built Stonehenge

There are probably hundreds of myths and legends about Stonehenge. Various people have attributed the building of this great megalith to the Danes, Romans, Saxons, Greeks, Atlanteans, Egyptians, Phoenicians Celts, King Aurelius Ambrosious, Merlin, and even Aliens.

One of the most popular beliefs was that Stonehenge was built by the Druids. These high priests of the Celts, constructed it for sacrificial ceremonies. It was John Aubrey, who first linked Stonehenge to the Druids. Additionally, Dr. William Stukeley, another Stonehenge antiquary, also claimed the Druids were Stonehenge's builders. Stukeley studied Stonehenge a century later than Aubrey and became so involved in the study of the Druid religion that he himself became one. Through his work he was very instrumental in popularizing the theory that Stonehenge was built by Druids.

Unfortunately researchers have proven this age-old theory linking Stonehenge's construction to the Druids impossible. Through modern radio carbon dating techniques, scientists have discovered that its builders completed Stonehenge over a thousand years before the Celts ever inhabited this region, eliminating Druids from the possibilities. Usually Druids worshipped in marshes and forests, but it has been verified that they did use Stonehenge occasionally as a temple of worship and sacrifice when they moved into the region.

Modern Druids, formally named the Grand Lodge of the Ancient Order of Druids, still congregate at Stonehenge on the midsummer solstice, clad in white robes and hoods. As recently as 1905, the Druids initiated 258 novices inside these stones on midsummer solstice. Today, for fear of its desecration, Stonehenge is usually shut off to public access on midsummer's eve.

Most scientists agree on the modern theory that three tribes built Stonehenge at three separate times. In approximately 3000 B.C., it is believe the first people to work on the site were Neolithic agrarians. Archaeologists named them the Windmill Hill people after one of their earthworks on Windmill Hill, which is near Stonehenge. The Windmill Hill peoples built large

The Stonehenge Survival Guide

circular furrows, or hill-top enclosures, dug around a mound and had collective burials in large stone-encased tombs. Most of their burial mounds point east-west. These people were a blend of the local peoples and Neolithic tribe members from Eastern England. They were one of the first semi-nomadic hunting and gathering groups with an agricultural economy and contained a strong reverence for circles and symmetry. They raised cattle, sheep, goats, pigs, grew wheat and mined flint.

The Beaker people, or Beaker Folk, came from Europe at the end of the Neolithic Period and invaded Salisbury Plain around 2000 B.C. Their name comes from one of their ancient traditions in which they would bury beakers, or pottery drinking cups, with their dead. Instead of burying their dead in mass graves, they showed more reverence for death by placing them in small round graves marked by mounds called tumuli.

It is assumed by archaeologists that the Beaker People were more warlike in nature than most tribes of their time because they buried their dead with more weapons, such as daggers and battle axes. The Beaker Folk were highly organized, industrious, used sophisticated mathematical concepts, and managed their society by using a chieftain system. They began using metal implements and living in a more communal fashion. Scientists believe they were sun worshipers who aligned Stonehenge more exactly with certain important sun events, such as mid summer and winter solstices.

The Wessex Peoples are considered the third and final peoples to work on the Stonehenge site. They arrived around 1500 B.C. at the height of the Bronze Age. They were by far one of the most advanced cultures outside the Mediterranean during this period. Since their tribal base were located where ridge ways, or ancient roads, met, they became skillful and well-organized traders, controlling trade routes throughout Southern Britain.

These people are thought to have been responsible for the bronze dagger carving found on one of the large sarsen stones within Stonehenge. They were a very smart culture, wealthy, and used greater precision in their calculations and construction. It is felt they used these talents in finalizing Stonehenge into what we see today.

Who Investigated Stonehenge

- **John Aubrey**

A Wiltshire scholar, while at Stonehenge he followed in the footsteps of the Duke of Buckingham's 1620 investigations as well as Inigo Jones, Charles I's court architect, who conducted the first details survey. Inigo Jones judged Stonehenge to be a Roman Temple. Aubrey's surveys of the site, on the other hand, revealed a set of depressions in a circle (inside the bank and ditch) which were rediscovered in the twentieth century and named after him. The Aubrey holes were among the earliest features of Stonehenge.

- **William Stukeley**

He is known as the single earliest investigator of Stonehenge and in its region. In 1740, Stukeley considered the landscape in its entirety and identified such important features as the Avenue and the Cursus. He systematically examined many barrows, burial mounds in the area. Additionally he recognized the solar alignment of Stonehenge and was the first to try to calculate it accurately. He believed the builders to have been the Druids of Celtic Britain and that Stonehenge was their temple.

- **William Cunnington**

William Cunnington and his collaborator Sir Richard Colt Hoare excavated many hundreds of barrows. In the process they discovered some of the finest artifacts of Bronze Age culture ever unearthed. Their principal excavations were undertaken in 1820 and thereafter a growing band of surveying excavators and visitors came to measure and dig at Stonehenge.

- **Christian Jurgensen Thomson**

In 1836 a Danish archaeologist devised a three phase system to describe the pre-historic past. He worked out that an age in which iron was extensively used predated by an age when people used bronze as their principal metal, which in turn was preceded by a time when tools were made of stone. With modifications, the system he devised has remained in use ever since. The principal alteration has been the further division of the age of stone into the

The Stonehenge Survival Guide

Paleolithic (Old Stone Age), the Mesolithic (Middle Stone Age), and the Neolithic (New Stone Age).

- **Sir William Gowland**

In 1901 Sir William Gowland was associated with the straightening of the dangerously leaning stones. Although he excavated only a limited area around a single stone at Stonehenge, Gowland's scientific approach and meticulous working methods gave Archaeologists critical information about the monument's construction and possible age.

- **Lt-Col William Hawley**

Between 1919 and 1926, Hawley discovered and recognized many features at Stonehenge. He began the refinement of dating and phasing that continues to the present day.

- **Professor Stuart Piggott**

Professor Piggott was the first to identify a specific "Wessex Culture" during the Bronze Age construction period at Stonehenge.

- **Professor Richard Atkinson**

Professor Atkinson popularized Stonehenge's archaeology. His research at Stonehenge began with a re-examination of Hawley's field notes. This process required new excavations. Piggott and Atkinson continued the process of detailed investigations at Stonehenge between 1950 and 1964. Atkinson's phases of construction remains the basis for describing Stonehenge's history, although the radiocarbon revolution has resulted in major revisions to the assigned dates.

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Stonehenge Legends and Myths

- **Did the ancient magician Merlin really build Stonehenge?**

It wasn't until the Dark Ages that Stonehenge started to be appreciated and looked at as more than just a unique pile of rocks. It was during this time that the mystique and legend of Stonehenge really started to get people's mind wondering what Stonehenge was used for and where it came from. Probably the most famous legend of Stonehenge deals with King Arthur and Merlin the Wizard.

Geoffrey of Monmouth in his 'Histories of the Kings of Briton' which was written in 1136, brings up King Arthur and Stonehenge for the first time. Geoffrey talks of Vortigern, Earl of the 'Gewissi' (in the time of King Constantine) who was planning to steal the crown from Constantine's son, Constans. When Constans was made King, Vortigern bribed some men to burst into Constans' sleeping chamber and cut off his head.

Vortigern then became King and ruled until the Saxon's, lead by Hengist and Horsa invaded England in the 5th century. Vortigen married Hengist's daughter Rowan in hopes to quell the invasion but Hengist still planned to take over Briton.

It was one fateful day near Salisbury 'on the Kalends of May' when Hengist called a meeting of Britons and Saxons. During the meeting the Saxons attacked the Princes of Briton and 'cut the throats of about four hundred and sixty.' This act leads to the battle of the Britons and Saxons at 'Mount Badon' in the 6th century where King Arthur is mentioned for the first time.

Ambrosius Aurelianus, according to Geoffrey was Uther Pendragon's (Arthur's magical father) brother and ruled with the help of the wizard Merlin. The modern town of Amesbury is thought by some to have derived its name from Ambrosius.

One day the King came to Salisbury 'where the Earls and Princes lay buried whom the accursed Hengist had betrayed' and was brought to tears. He wondered how best to make the place memorable. Merlin said,

The Stonehenge Survival Guide

“If thou be fain to grace the burial-place of these men with a work that shall endure forever, send for the Dance of the Giants that is in Killaraus, a mountain in Ireland. For a structure of stones is there that none of this age could raise save his wit were strong enough to carry his art. For the stones be big, noris there stone anywhere of more virtue, and, so they be set up round this plot in a circle, even as they be now there set up, here shall they stand for ever.”

The King replied,

“But how many this be, that stones of such bigness and in a country so far away may be brought hither, as if Britain were lacking in stones enough for the job?”

Merlin answered,

“Laugh not so lightly... in these stones is a mystery and a healing virtue against many ailments. Giants of old did carry them from the furthest ends of Africa and did set them up in Ireland what time they did inhabit there... not a stone is there that lacketh in virtue of witchcraft.”

The King decreed that Uther Pendragon and fifteen thousand men would go to retrieve the stones.

According to Geoffrey of Monmouth, giants originally brought the stones of the Giant’s Ring from Africa to Ireland. The stones located on ‘Mount Killaraus’ were used as a site for performing rituals and for healing.

Led by King Uther and Merlin, the expedition set off for Ireland. The Irish heard of the expedition and King Gilloman raised his own army vowing that the Britons should not ‘carry off from us the very smallest stone of the Dance.’ In the end, Uther and his men prevailed in their battle with King Gilloman and proceeded to Mount Killaraus.

The Britons were unsuccessful in their attempts to move the great stones. At this point, Merlin realized that only his magic arts would turn the trick. So, they were dismantled and shipped back to Britain where they were set up as they had been before, in a great circle, around the mass grave of the murdered noblemen. Geoffrey also adds that Uther Pendragon, and King Constantine were also buried at Stonehenge.

The Stonehenge Survival Guide

Stonehenge and the Science of Archaeoastronomy

- **What is Archaeoastronomy?**

“Archaeoastronomy is the belief that early peoples, in even a primitive state of intellectual advancement, took notice of the sky and its changes.”

Archaeoastronomy is an interdisciplinary field that relates archaeology, anthropology, and mythology with astronomy.

- It is sometimes called historical astronomy.
- It is a science that concerns the recovery and study of evidence of the astronomical beliefs and practices of ancient or preliterate peoples.
- It requires the collaboration of archaeologists, astronomers, and other specialists, for the evidence is often subtle and subject to diverse interpretations.

The Archaeoastronomer wants to gain insight into the intellectual achievements of cultures:

- The builders of megaliths (stone monuments) that have astronomical orientations.
- The makers of glyphs (symbolic figures) that have astronomical significance.
- Archaeoastronomical findings may also be of value to astronomers in documenting ancient celestial events.

Three related terms are used to refer to specialized areas of the field:

- Astroarchaeology and megalithic astronomy generally concern the measurement and astronomical interpretation of architectural structures of prehistoric origin, such as Stonehenge.
- Ethnoastronomy is the study of astronomical and astrological beliefs and sky lore of early peoples.

The basis for archaeoastronomy is the belief that early peoples, in even a primitive state of intellectual advancement, took notice of the sky and its

The Stonehenge Survival Guide

changes. Which of these features were recognized, and how they were used for practical or ceremonial purposes, is a measure of the cultural complexity of the people studied.

The most obvious of the periodic changes are the phases of the Moon (the basis for the month) and the annual motion of the Sun and changing panorama of star patterns, by which the year can be accurately defined. Identifying the planets and their cyclic movements is more complex, as is plotting the complicated pattern of the Moon's motion in the sky. In time the culture made use of their observations in rituals and myth, for regulating a calendar, or for purposes such as anticipating yearly floods and setting dates for agricultural activities.

- **Origins in the Old World**

Evidence for early knowledge of the heavens is found in such archaeological features as stone alignments and stone circles, in building orientations, and in pictorial or written records. The best-known evidence that early humankind used the sky is Stonehenge, near Salisbury, England.

In 1740, William Stukeley was probably the first to person apply archaeoastronomical ideas toward Stonehenge. Stukeley noted that the principal axis of the monument was oriented to the direction of sunrise at summer solstice (June 24). Currently it falls on June 20 or 21.

In the late 19th and early 20th centuries these ideas became the subject of controversy when Sir Joseph Norman Lockyer, Piazzzi Smyth, and others attempted more extensive astronomical explanations of Stonehenge and other British stone circles, of the Pyramids and temples of ancient Egypt, and of certain temples of classical Greece. In all cases, alignments on various astronomical bodies were noted, and attempts were made to link these to the calendar and to sky worship.

Lockyer also tried to confirm or establish construction dates of the sites for which astronomical orientation was claimed, making use of known changes in the aspect of the heavens that result from long-term changes in the rotational axis of the Earth (precession).

Over the millennia, solstices shift slightly forward in the calendar. Astronomers have accounted for this shift by observing that the Earth

The Stonehenge Survival Guide

processes slowly as it rotates on its axis, like a top that wobbles as it spins. This precession makes one complete cycle every 26,000 years. This phenomenon causes the time of the solstices and equinoxes to change and also causes, over time, changes in the apparent location of a polestar, or North Star.

- **Today**

Today the field of Archaeoastronomy is actively studied in all throughout Western Europe. Scientists have demonstrated that a relatively high level of astronomical achievement existed among the Early Bronze Age inhabitants of the British Isles and Brittany (western France).

More controversial are the suggestions that the Bronze Age builders used structures such as Stonehenge to predict the dates of lunar and solar eclipses and that a standard unit of length (“the megalithic yard”) was used in laying out the megalithic stone circle.

Other Stone Structures

There are at least 900 other structures of a similar nature that exist in the British Isles alone. At Carnac on the western coast of France are more than 3,000 stone monuments for which astronomical alignments have been claimed.

- **Tombs**

Newgrange, northwest of Dublin, Ireland, is a Neolithic tomb, part of which was built as early as 3100 BC. It also indicates probable early knowledge of astronomy. The tomb has a long, narrow passage with a slitlike opening that appears to have been designed and engineered to permit the sunlight to enter the burial chamber at the far end momentarily on the morning of the winter solstice.

- **Egyptian Pyramids and Temples**

From architectural studies of ancient Egypt, there is considerable evidence of early, though not prehistoric, astronomical knowledge. The base of the Great Pyramid at Giza is aligned closely with the four points of the compass, and its hidden north passage is aligned with the lower culmination of the North Star at the time the pyramids were built (between 2686 and 2345 BC).

The great temple of Amon, or Amen (Ra), at El Karnak was aligned with the midwinter sunrise during the epoch of Thutmose III (1479-26 BC).

A nearby temple of Khons, the Egyptian moon god, was built to align with the distant hills of Thebes, the northernmost extreme of the setting of the new moon crescent at the time of the summer solstice.

- **Mayan Civilization**

The Dresden Codex, written by the Maya during the 1st millennium of the Christian era, contains astronomical calculations—eclipse-prediction tables, the synodic period of Venus—of exceptional accuracy.

The Stonehenge Survival Guide

Temples and pyramids in what are now Mexico and Guatemala were often constructed and aligned with attention to astronomical phenomena.

- **American Indians**

The Plains Indians left stone patterns called medicine (magic) wheels, found along the eastern boundary of the Rocky Mountains from Colorado to Alberta and Saskatchewan.

One of the best known is on top of Medicine Mountain, in the Bighorn Mountains west of Sheridan, Wyo. It is accessible only in the summer, and calculations have been made relating the arrangements of crude sandstone to the sunrise and sunset about the time of the summer solstice and to bright stars that would have been visible at the time archaeologists estimate its construction, about 200 to 400 years ago.

Another medicine wheel, at Moose Mountain in southeastern Saskatchewan, has demonstrably similar relationships but has been estimated as dating from about 2,600 years ago.

- **South Pacific Cultures**

A number of stone alignments have also been found in the South Pacific. Such stones on land would, of course, be useless at sea, but it has been suggested that the sites were used for observation and to train voyagers to identify the correct navigational stars before their departure.

The Micronesians and Polynesians used as navigational tools strings of bright stars that rose or set near the same point on the horizon.

The Caroline Islanders had a 32-point star compass for defining this point, using Vega, the Pleiades, and other stars.

The Stonehenge Survival Guide

Tourist Information

- **Official Stonehenge Management Site**

Stonehenge is managed by The English Heritage organization.

<http://www.english-heritage.org.uk/>

They should be contacted for everything regarding visiting Stonehenge. The information provided below is not guaranteed to be correct.

- **How To Get There**

Stonehenge is about 2 miles west of the town of Amesbury in Wiltshire and only 90 miles west of London. There are many tour companies offering day trips from London or you can drive. The nearest railway station I am aware of is Salisbury and there are regular trains leaving from Waterloo Station in London.

Road Access

2 miles West of Amesbury on the junction of A303 and A344/A360.

Heathrow Airport

Follow the signs for M4 West. In about 2 miles exit junction 4b onto the M25 south bound. Follow the signs for Gatwick Airport. Look for the Basingstoke sign (junction 12) to the M3 motorway. Continue on the M3 to A303 Andover (junction 8). Follow the A303 ALL the way until you reach a roundabout. Pass through this and in 2 miles you will need to bear right onto the A344. In about 500 meters there is car parking on the right hand side.

Gatwick Airport

Take the M23 motorway to the M25 motorway following the signs for Heathrow Airport. Look for the Basingstoke sign (junction 12) to the M3 motorway. Continue on the M3 to A303 Andover (junction 8). Follow the A303 ALL the way until you reach a roundabout. Pass through this and in 2

The Stonehenge Survival Guide

miles you will need to bear right onto the A344. In about 500 meters there is car parking on the right hand side.

Train Access

The nearest train station to Stonehenge is Salisbury 9½ miles away. From London you need to depart from the Waterloo Station. Trains run approximately every hour and take about an hour and a half to reach Stonehenge. The first train normally starts around 6:00 am with the last train about midnight. The fares vary, but you should allow about £25 return. There is reduced train service during the winter months, Sundays, and Bank Holidays.

- **Opening Times**

From	To	Open	Closes
16 Mar	31 May	9:30 am	6:00 pm
1 Jun	31 Aug	9:00 am	7:00 pm
1 Sep	15 Oct	9:30 am	6:00 pm
16 Oct	15 Mar	9:30 am	4:00 pm
Closed: 24 - 26 Dec & 1 Jan			
Additional Notes: Recommended last admission time no later than 30 minutes before the advertised closing time. Stonehenge will close promptly 20 minutes after the advertised closing time.			

- **Entry Costs (£)**

Adults	£5.00
Children	£2.50
Concession	£3.80
Other	Family ticket (2 adults & 3 children) £12.50 10% discount for groups of eleven or more paying as one group.

The Stonehenge Survival Guide

• Facilities

Facilities Available	Parking Tearooms or Restaurant Suitable for people with disabilities Male/Female Toilets Guidebooks No dogs allowed Audio tours (included in admission price) Shop
Facilities Details	Guide and hearing dogs welcome. Stonehenge Kitchen is open all year. Guidebooks are also available in French, German and Japanese, large print and Braille guides in English only. Audio is complementary and available in nine languages and hearing loop (subject to availability). Average stay: 1 hour

• Accessibility Information

Access	On tarmac and grass path around outer circle (subject to weather conditions). One wheelchair available to visitors on request at entrance kiosk.
Parking	Reserved parking for disabled drivers is available close to entrance. Ticket office reached by short, sloping tarmac path.
Visually Impaired Visitors	Braille and large print guides are available on request. Touching Stones accessible at the main entrance.
Hearing Impaired Visitors	Audio tour with hearing loop in nine languages (subject to availability).
Facilities	Toilets: WC adapted for wheelchair users in large toilet block at far end of car park. Shop: Level access. Refreshments: Light refreshments are available from the

The Stonehenge Survival Guide

	Stonehenge Kitchen.
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- **Contact Information**

Telephone	Information Line: (01980 624715) Fax: (01980) 625368
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- **Local Tourist Information**

Amesbury (Tel 01980 622833)
Salisbury (Tel 01722 334956)
Bus: 0870 608 2608 Wilts & Dorset 3
Train: Salisbury-Stonehenge. Salisbury 9½m.

Stonehenge is situated at the junction of the A303 and the A344, just west of Amesbury in Wiltshire.

- **Private Access to Stonehenge**

It is possible to arrange for Private Access to the inner circle at Stonehenge, subject to certain conditions, from dawn until half an hour before the site opens or half an hour after the site has closed until sunset or dusk (whichever is earliest). This is only possible during the times when Stonehenge is closed to the general public:

Month	Morning	Evening
April	0645 hrs (6.45am) 0800 hrs (8.00am)	1830 hrs (6.30pm)
May	0530 hrs (5.30am) 0645 hrs (6.45am) 0800 hrs (8.00am)	1830 hrs (6.30pm) 1945 hrs (7.45pm)
June	1st June - 16th June ONLY 0500 hrs (5.00am) 0615 hrs (6.15am) 0730 hrs (7.30am)	1st June - 16th June ONLY 1930 hrs (7.30pm) 2045 hrs (8.45pm)
July	No private access from 17th – 30th June 2004 inclusive 0500 hrs (5.00am) 0615 hrs (6.15am) 0730 hrs (7.30am)	1930 hrs (7.30pm)

The Stonehenge Survival Guide

August	0615 hrs (6.15am) 0730 hrs (7.30am)	1930 hrs (7.30pm)
September	0645 hrs (6.45am) 0800 hrs (8.00am) No private access 21st and 22nd September 2004	1830 hrs (6.30pm)
October	Limited Availability	Limited Availability
November	Not available	Not available
December	0800 hrs (8.00am) No private access 20th – 26th December inclusive	Not available
January	No private access 1st January 2005	
	0800 hrs (8.00am)	Not available
February	0800 hrs (8.00am)	Not available
March	0645 hrs (6.45am) 0800 hrs (8.00am)	1st - 15th March 1630 hrs (4.30pm) 16th March - 31st March Not available
	No private access 18th – 23rd March 2005	

Please note English Heritage reserve the right to cancel any arranged visits at short notice and will not be held liable for any costs incurred. We do not take bookings for Private Access on Tuesday or Wednesday mornings as these times are set aside for grounds maintenance. However, due to variable weather conditions it may be necessary to conduct grounds maintenance and grass cuttings at other times.

An application form can be downloaded in pdf format from [here](#).

The Stonehenge Survival Guide

eBook Bonus Details

When you purchased this eBook you were given 2 bonuses:

Bonus #1: Writing Success Secrets - wssecrets-revised.pdf in the Zip file. This is a wonderful FREE eBook packed with over 20,000 words of tips, tricks, advice and information on how to improve one's writing in just about every area where practical writing help is required on a day-to-day basis. The nine chapters cover 20 different writing topics including: letter writing (personal, business), business reports, recommendation and reference letters, resignation letters, resume writing, writer's block, writing tools, college admission essays and personal statements, and more. This eBook is a "must have" reference resource for anyone wanting to improve their practical writing skills for home and/or business.

Bonus #2: Personal consultation - You will have the chance to communicate with me personally on whatever two subjects you want regarding Stonehenge. I have created a special email address - consultation@christiaan.com that you can contact. I will make every attempt to work with you in hopes to provide the information you requested via email. If I cannot answer any of your two emails, I will give another free email question.

The Stonehenge Survival Guide

In Closing

Thank you again for taking the time to read “The Stonehenge Survival Guide.”

I hope it provided you the information you were looking for. If you didn't find what you were looking for or think I need more information please help me by filling out my survey.

Any information you give will only help me fix problems and provide more helpful content on Stonehenge. Your information will be kept strictly confidential and only used to improve my web site and eBook.

So please fill out my survey:

<http://www.christiaan.com/stonehenge/survey/>

Thank you for taking the time to fill out the survey and helping keep the education of Stonehenge alive!

Sincerely,

Christiaan Stoudt

<http://www.christiaan.com/stonehenge/>

Stonehenge facts quick and easy!