

# **ORKNEY - THE CULTURAL HUB OF BRITAIN IN 3,500 BC - A WORLD HERITAGE SITE FROM 1999.**

*THE INGENIOUS PRE-HISTORIC INHABITANTS OF WHAT ONLY BECAME SCOTLAND IN THE 9<sup>TH</sup> CENTURY AD.*

**By James Macnaughton**

As indicated in the title, people lived in the Northern part of Britain for many thousands of years before it became Scotland and they were called Scots. Given its wet, cool climate and its very mountainous terrain, those inhabitants were always living on the edge, fighting to grow enough food to survive through the long winters and looking for ways to breed suitable livestock to provide both food and skins and furs from which they could fashion clothing to keep them warm and dry.

20,000 years ago, present day Scotland lay under a 1.5 Km deep ice-sheet. This is so long ago that it is difficult to imagine, but if you consider a generation to be 25 years, then this was 800 generations ago, and for us to think beyond even two or three generations of our families, this is almost unimaginable. From 11,000 years ago, the ice was gradually melting from the South of England towards the North and this occurred more quickly along the coasts where the ice was not so thick. Early inhabitants moved North along the sea coasts as hunter gatherers and by 10,000 years ago, some of them had settled near Banchory in Aberdeenshire on the banks of the River Dee. The warming climate and the plentiful supply of fish from the river, and game from the surrounding forests, encouraged them to create a permanent settlement and to change from nomadic hunter gatherers to settled farmers. We modern people tend to think of these early people as unintelligent, mentally simple beings, because they could not read or write and lacked all the modern tools which make life much easier for us, but, as will be seen, this was far from the case.

At Warrenfield near Banchory recent archaeological evidence has shown that they constructed a giant "year clock", with wooden posts in pits oriented to mark the phases of the moon, and, even more sophisticated, the alignment of the midwinter sunrise. Twelve of them, in a 50-metre-long row, were arranged as an arc facing a V-shaped dip in the horizon. This marking of the winter solstice (21/22 December) enabled them to calculate the year end and to adjust their lunar calendar, because lunar months (13 x 28 days) are not in step with the solar year, i.e. the time taken for the earth to orbit the sun (365 1/4 days). The importance of this calendar was to indicate when they should sow their spring crops. So, these early settlers in Aberdeenshire created their calendar 5,000 years before the first formal calendars were created in Mesopotamia, hitherto regarded as the cradle of civilization!

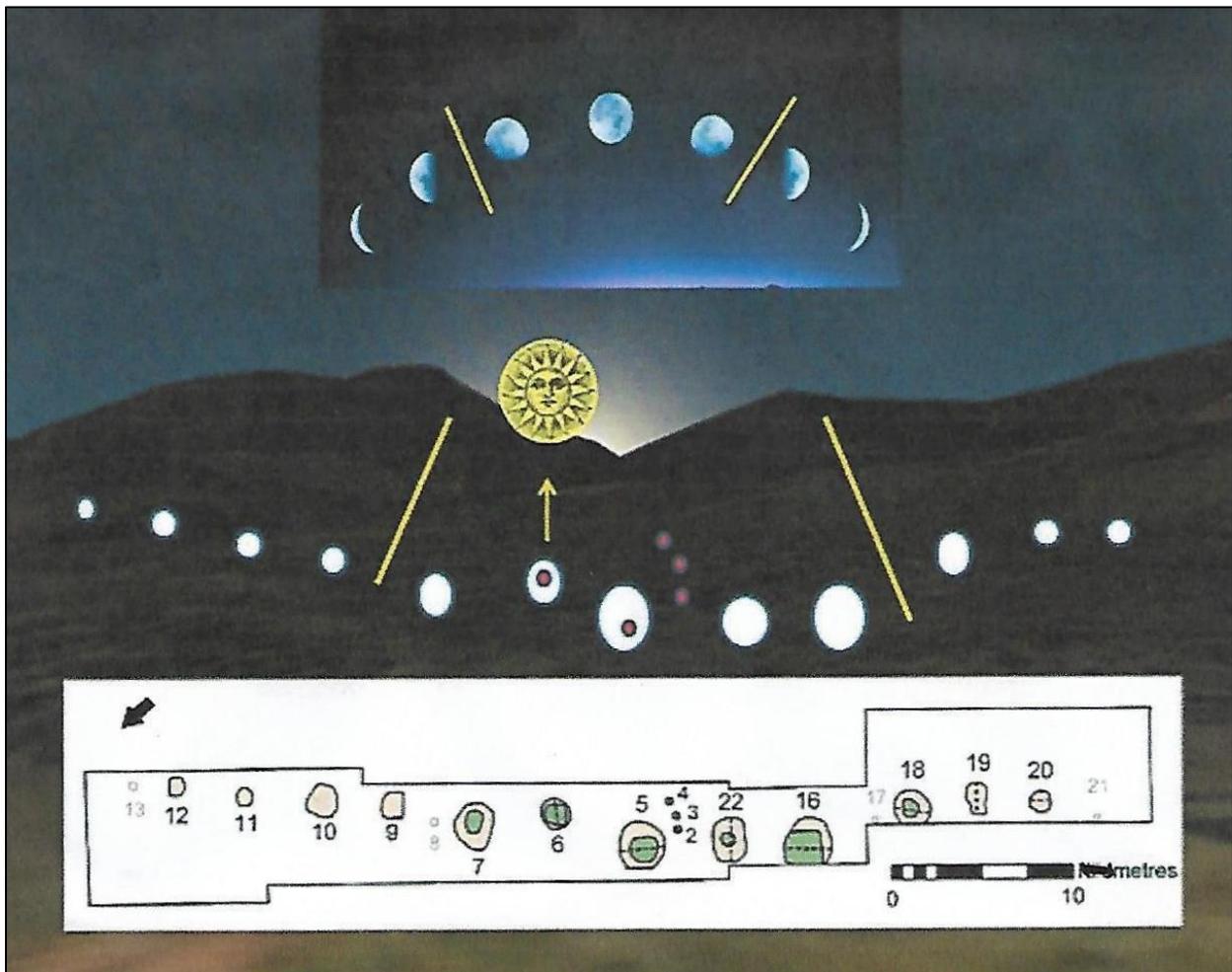


Figure 1: This image shows how the monument at Warren Field would have worked. (V. Gaffney et al).

As if this intelligent ingenuity were not enough, moving forward another 5,000 years to 3,500 BC, recent excavations on Orkney have revealed, at Ness of Brodgar, the site of a very sophisticated culture, which had created the first real "city" long before Stonehenge was built in Southern England in 3,000-2,000 BC. This Heart of Neolithic Orkney was created a World Heritage Site in 1999, and Historic Scotland described it as follows:

*"The monuments at the heart of Neolithic Orkney and Skara Brae proclaim the triumphs of the human spirit in early ages and isolated places. They were approximately contemporary with the mastabas of the archaic period of Egypt (first and second dynasties), the brick temples of Sumeria, and the first cities of the Harappa culture in India, and a century or two earlier than the Golden Age of China. Unusually fine for their early date, and with a remarkably rich survival of evidence, these sites stand as a visible symbol of the achievements of early peoples away from the traditional centres of civilisation. Stenness is a unique and early expression of the ritual customs of the people who buried their dead in tombs like Maes Howe and lived in settlements like Skara Brae."*

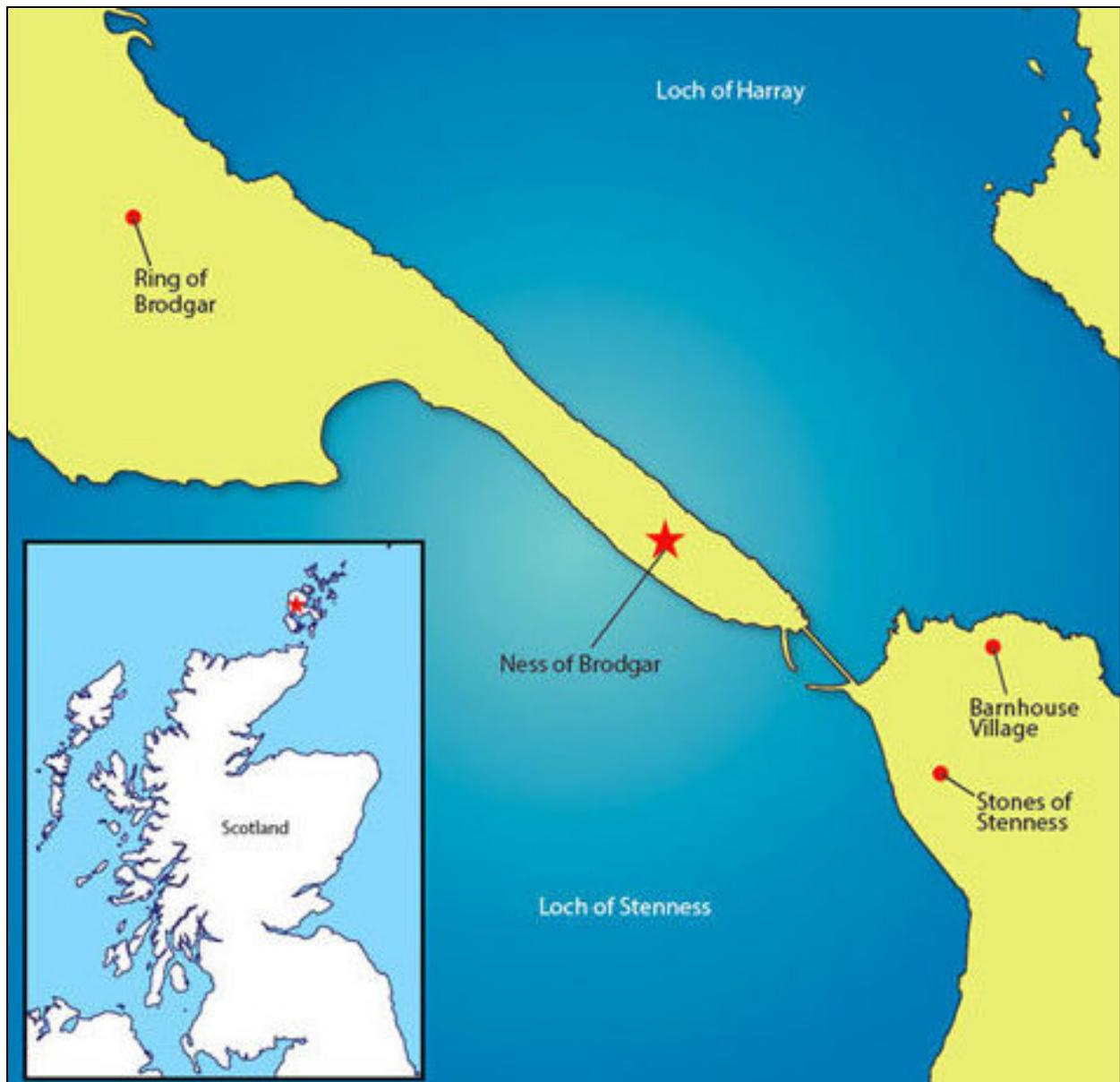


Figure 2: Map of Scotland (insert) and map of Orkney with Neolithic sites marked.

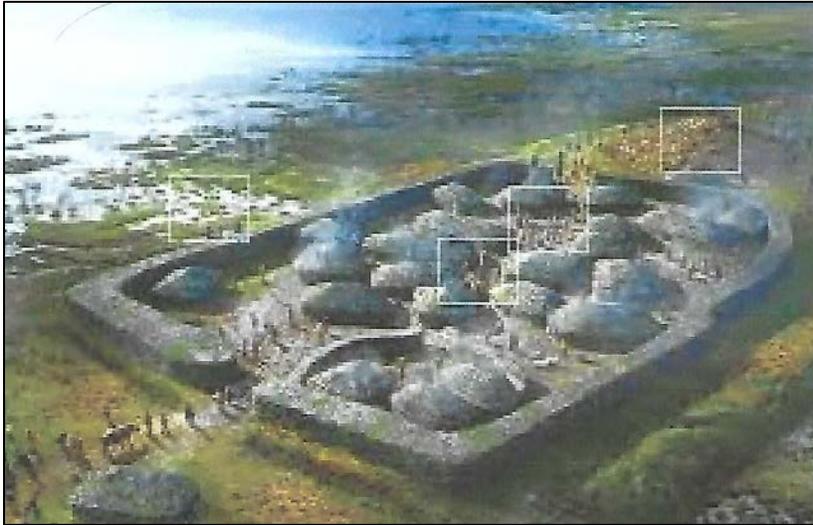
As indicated, from 3,500 BC- 3,200BC the Neolithic inhabitants developed on the spectacular setting of the Ness of Brodgar- { a narrow isthmus between the fresh water Loch of Harray to the East, and the salt water Loch of Stenness to the west, and with the Ring of Brodgar to the North - symbolising the land of the Ancestors and the Stones of Stenness to the South - symbolising the land of the Living - along with the chambered tomb of Maes Howe) - a well-planned city-like settlement, with, at its centre - designed for ritual ceremonies for the spiritual transition of the dead to the next world - a series of 12 roofed temple structures surrounded by a massive 13 foot wide wall to act as a symbolic barrier between the ritual landscape of the enclosure and the normal.



**Figure 3: The Ring of Brodgar – Sitting within a natural amphitheatre of hills and surrounded by a ditch, 27 of the original 60 stones survive.**



**Figure 4: Sheep graze among the Stones of Stenness, one of the many Neolithic sites in Orkney. Just Beyond the standing stones lies the Ness of Brodgar, a Neolithic complex without parallel in Western Europe.  
Photo by Lorna Baldwin.**



**Figure 5: The Ness of Brodgar.**

Built in 2,900 BC the main temple, a Neolithic Cathedral showing the finest architecture in Europe at that time, and far bigger than any other contemporary buildings, is 82 foot long by 66 foot-wide with 13 foot-thick walls. This was a building designed by a powerful elite with the express intention of arousing feelings of awe and admiration in the general

population. It reflects the prosperity of the farming inhabitants who somehow could spare enough men to build all these complex structures. Unbelievably, this remote society, the cultural hub of Britain long before London, came up with new ideas, designs, beliefs and ways of doing things which spread far and wide across Britain.



**Figure 6: The Ness of Brodgar from the air in 2012. Photo courtesy of Nick Card.**

Inside the temple, only open to access by the priests, a Standing Stone with a hole shaped like an hour glass is incorporated into the wall. There is a cross-shaped inner sanctum with four shelved dressers. This main temple, built to honour the dead, and in which they were purified by fire- as is shown by the presence of hearths - is surrounded by about a dozen smaller ones, all very skillfully constructed (with the aim of impressing the hoi poloi), using red and yellow sandstone which split easily into building blocks, and providing evidence that Neolithic people painted their buildings red, orange and yellow, and provide the oldest evidence of painted walls in northern Europe. The yellow, red and orange pigments were made of haematite mixed with animal fats and milk and egg. Inside, many stone mace heads have been found, all broken in two at exactly the same place during the funerals, half for the family and half for the dead person. A figurine- called the Brodgar Boy- was found, with head and eyes and body. A very rare carved stone ball and an intricately inscribed stone were also found. A beautifully polished stone axe head blue with white markings – obviously, a ritual object-has also been discovered, along with finely worked stone spatulas resembling flattened spoons, which show no signs of any wear. Grooved ware pottery coloured black, red or white originated here and gradually spread to the South of Britain. The buildings were roofed with stone tiles (another first) rather than turf, skins or thatch. Orkney had very little in the way of large trees, so the roof trusses probably came from Scandinavia or were formed from large bits of drift wood coming across from N. America on the Gulf Stream. This impressive temple was re-modelled around 2,400BC, showing how important it was to the community.

The site is ideal for watching the rising and setting of the sun and moon and other stars. Cosmology helped, as it had done at Warrenpoint near Banchory, to predict the seasons for the farmers. The stones in the Ring of Brodgar nearby had also been carefully positioned to study the movement of the moon.

**Figure 7: Artifacts found during archaeological dig.**





In places the submerged coastal lands of Orkney also preserve buried evidence of the environment in the centuries before the seas rose. Deposits of peat survive in the inter tidal zones of many beaches, witness to a time when the vegetation of the coastal lands comprised patches of marsh and bog land. Elsewhere actual tree trunks survive, relics of coastal woodland that must have grown above the shore. The study of these remains can provide important evidence, not just of the people of the past, but also of the world that they inhabited, a world that was, in many ways, very unlike our own.

**Figure 8: Orkney Islands.**

At that time, after the recent melting of the ice-cap, the sea level was 120ft. lower than in later years, which meant that the Orkney landmass was twice as large as it was reduced to after 2,000BC, when rising sea levels broke it up into a 70-island archipelago.

The sea and the lochs were rich in food, and with the greater area of land available while the sea levels were lower, there was more woodland, which sheltered animals like red deer. Cattle, too, were gradually introduced and the Neolithic inhabitants diet changed to more meat eating than fish and shellfish. With such settled conditions the population grew, and all went well until the sea levels inexorably rose after more ice had melted, the amount of cultivable land was considerably reduced, causing very stressful changes and encouraging spiritual thought.

**Figure 9: Skara Brae.**

Around 2,300 BC the city at the Ness of Brodgar was suddenly completely closed and the temple was destroyed after a final gigantic meat feast attended by people from all over Britain, after which the majority of the population moved South. The bones of around 400 cattle have been found and an upturned cow skull was unearthed in the temple, substantial evidence of this closing down feast. Around this date there was a very large eruption of the Icelandic volcano Hekla, which may have resulted in cataclysmic climate consequences across N. Europe.



**Skara Brae.**



**Barnhouse**

**Figure 10: Barnhouse.**

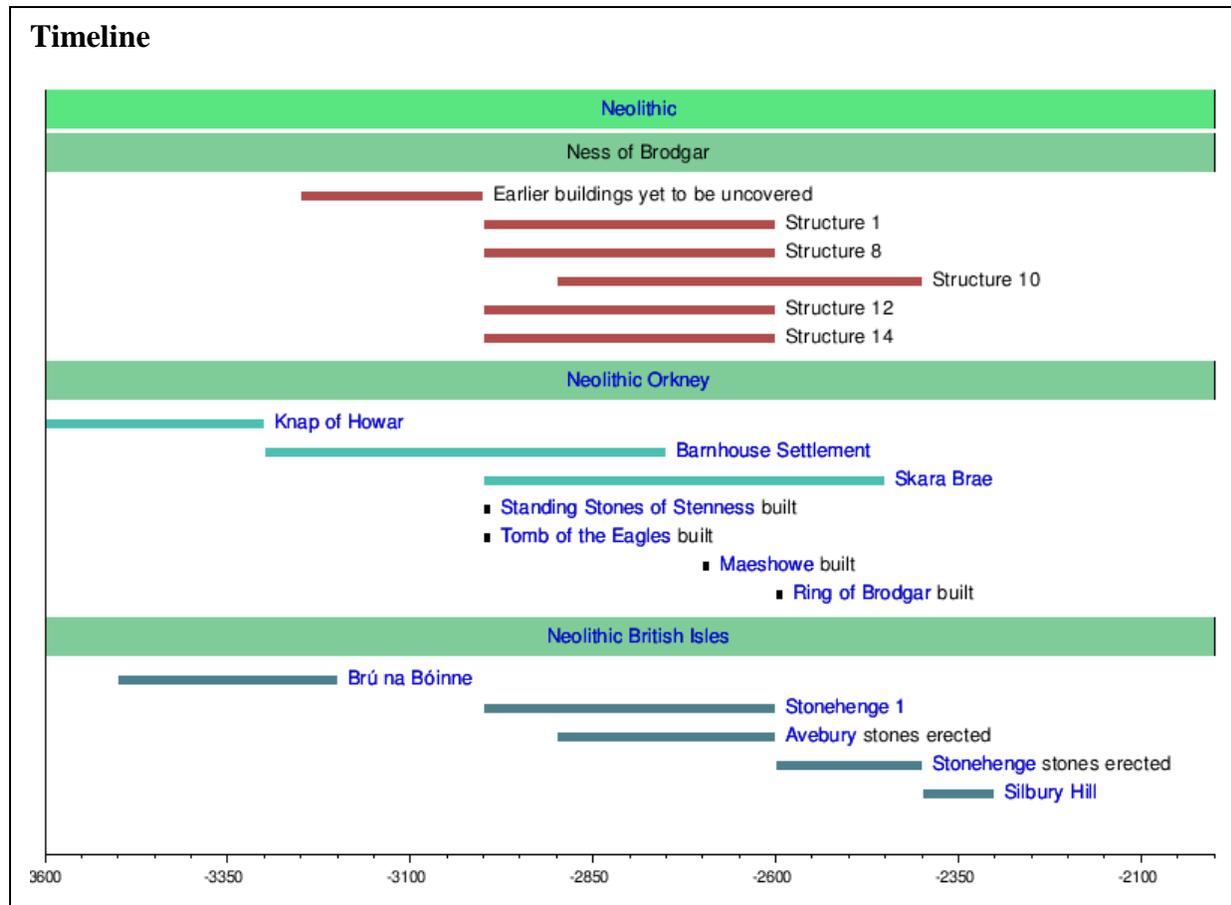
However, if you think about the 1,500 years through which the Ness of Brodgar was a thriving city, that would take us from 2016 right back to the reign of King Nechtan 1 of the Picts in 516AD - totally amazing if you think about it!

Away from the Ness of Brodgar the oldest house of stone still standing and also dating from 3,500 BC, is at Knap of

Howar on Papa Westray, Orkney's most Northerly island. Its walls are still intact up to eaves height and there is stone furniture inside. Chambered Cairn Tombs nearby contain finely decorated Unstan ware pottery. On the coast to the North of Brodgar is Skara Brae, an ancient settlement dating back to 3,000 BC, which was revealed after a big storm washed away the sand dunes which had covered it for centuries. Its buildings were half sunk into the ground to provide

shelter from the incessant gales which sweep over Orkney. Barnhouse, another stone age village, is near the Stones of Stenness, S.E. of the Ness of Brodgar. It was abandoned around 2,700BC when the land became too boggy and crops did not flourish any more.

Only about 10% of the Ness of Brodgar site has been excavated so far, and the archaeological work has concentrated on the floor levels of the uppermost structures, so there is a lot more to discover at deeper levels. Also, with the rise in sea level, there are probably more archaeological sites under the waters surrounding the islands. It will keep us all fascinated for many years to come!



#### SOURCES FOR TEXT AND ILLUSTRATIONS FOR ARTICLE ON THE NESS OF BRODGAR, ORKNEY

1. PBS NEWSHOUR pbs.org newshour – some text and photos of the site. Stones of Stenness.
2. Megalithic.co.uk/article.php – Ness of Brodgar, Carved Stones, Warrenfield – Crathes castle.
3. en.wikipedia.org/wiki/Ness\_of\_Brodgar.
4. scapaflo.co/index.php/history-Orkney before the rise in sea level.
5. archaeology.org/issues/61-130/features/327-scotland-orkney-neolithic-brodgar-stone axe text, Ring of Brodgar. Barnhouse, Skara Brae, Map of Scotland.
6. Warrenfield Calendar – sci-news.com/archaeology/www.science-worlds-oldest-calendar-scotland-01230.html.
7. Sunday Times 14-7-2013 – Article on Warrenfield.
8. Ordnance survey map of Orkney Mainland.