

History of Architecture I

ARC 2313 - Spring 2022

Lecture-03

24 January 2022

For Wednesday, 26 January:

Ingersoll pages 34-47

Vitruvius pages 5-16 and 38-41

(Download Vitruvius at website)

Two Major Themes: **Shelter & Symbol**

The act of **dwelling** for humans addressed
at once the problem of creating shelter
and the challenge of making a
**symbolic representation of their
understanding of the world....**

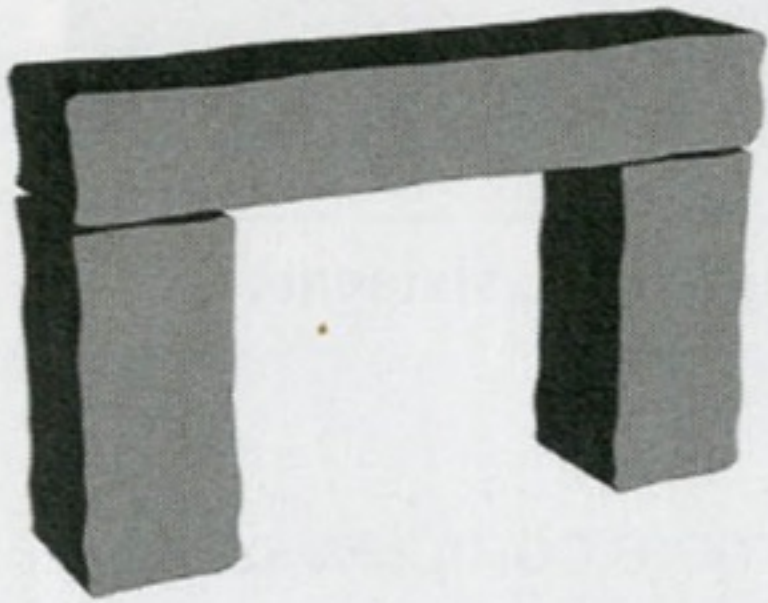


Subtractive forms

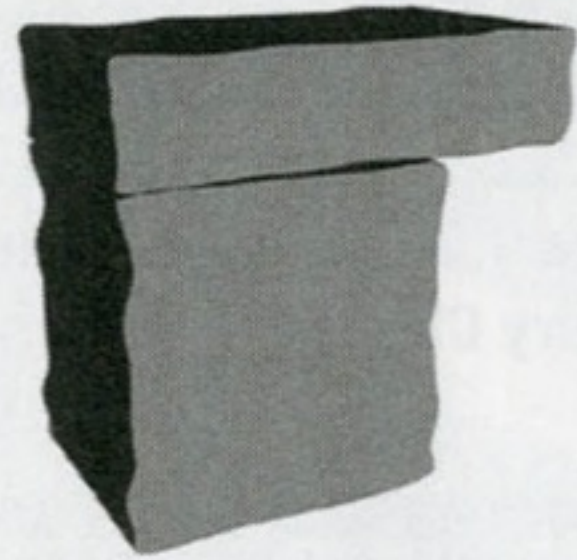


Additive forms

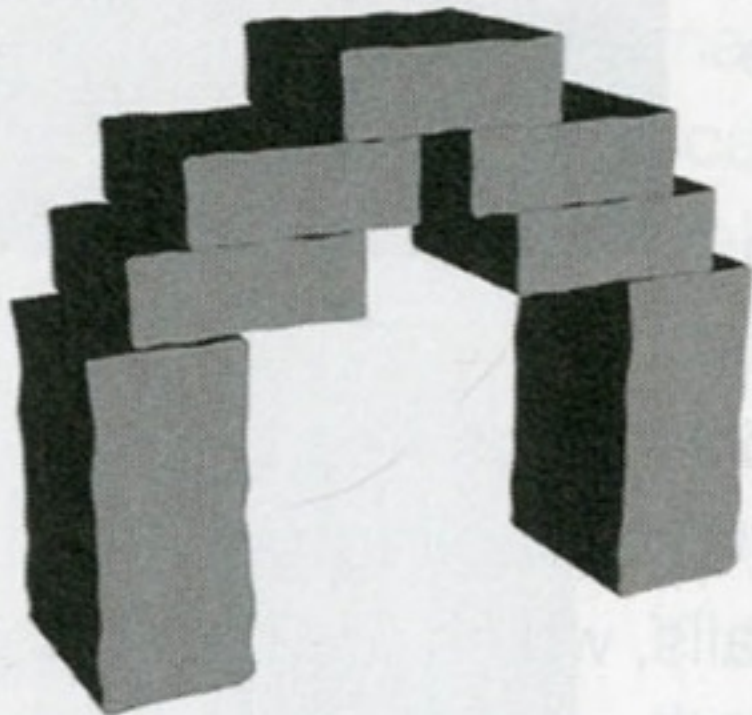




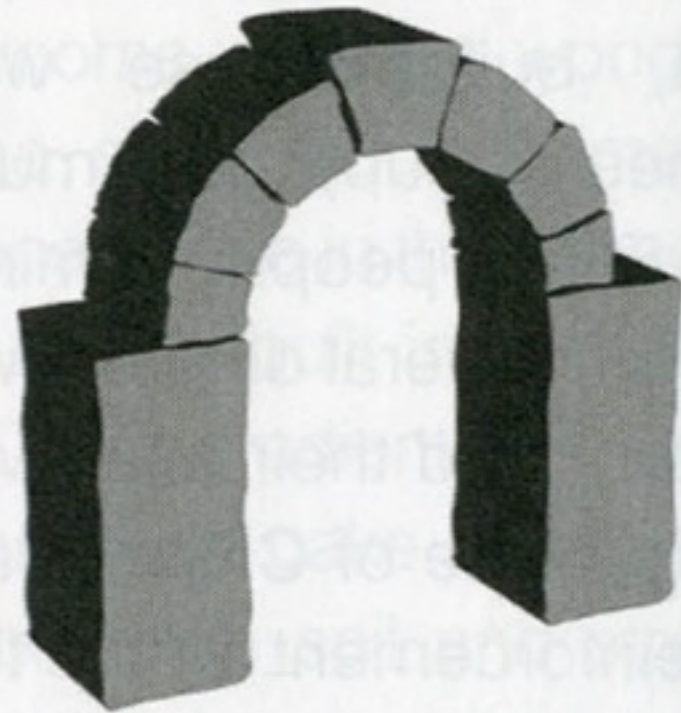
post & lintel
post & beam



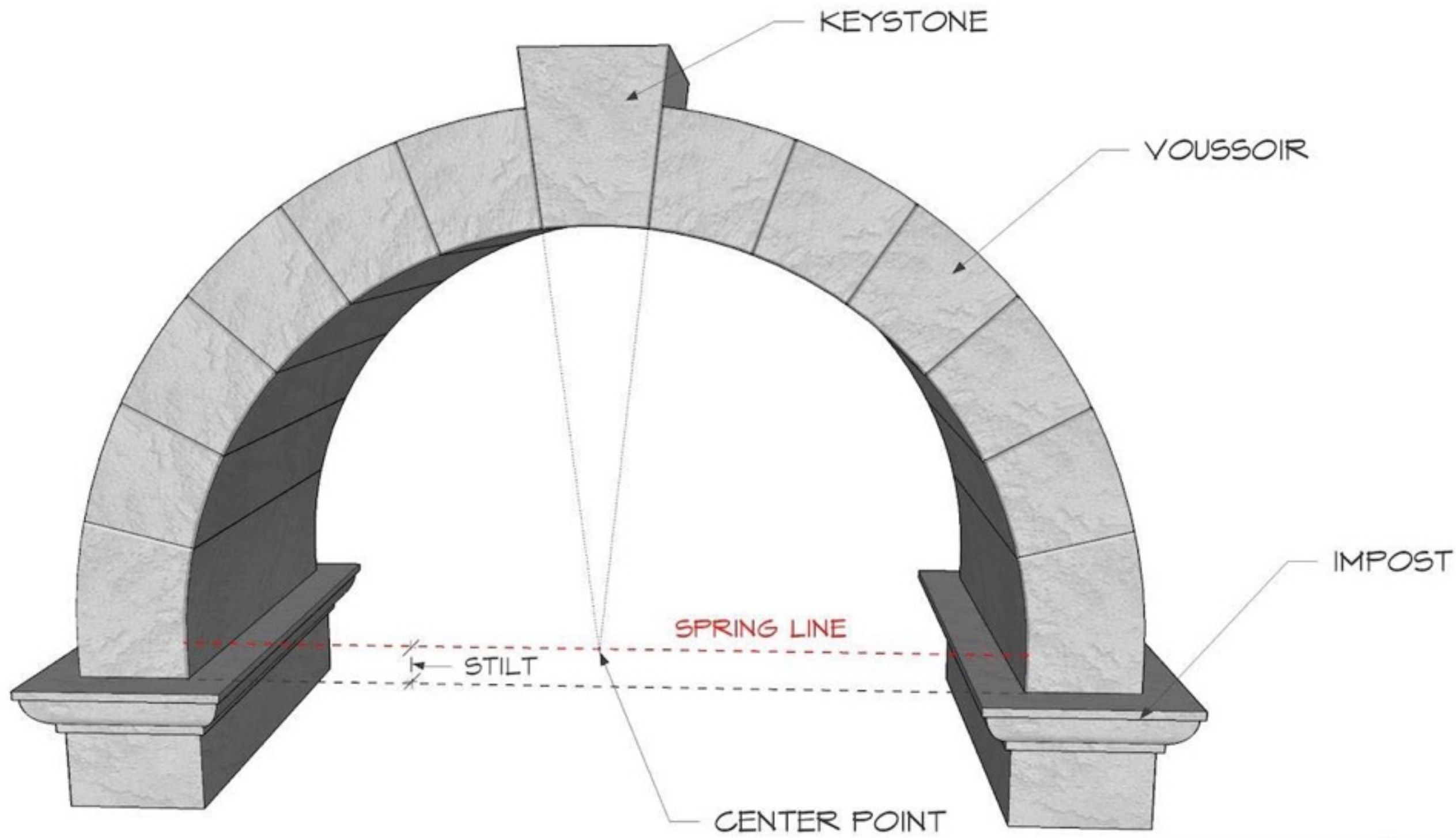
cantilever

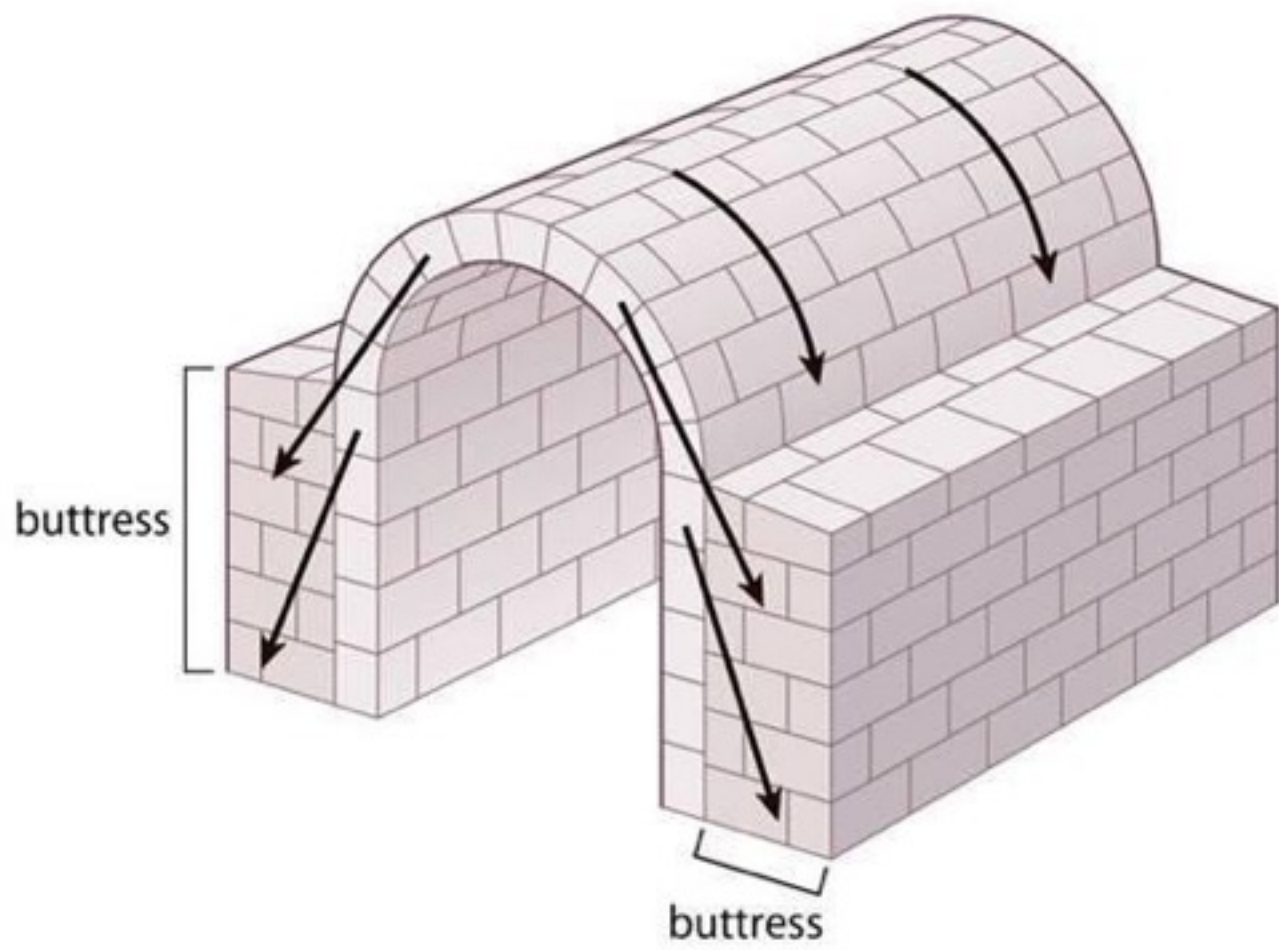


corbelled arch

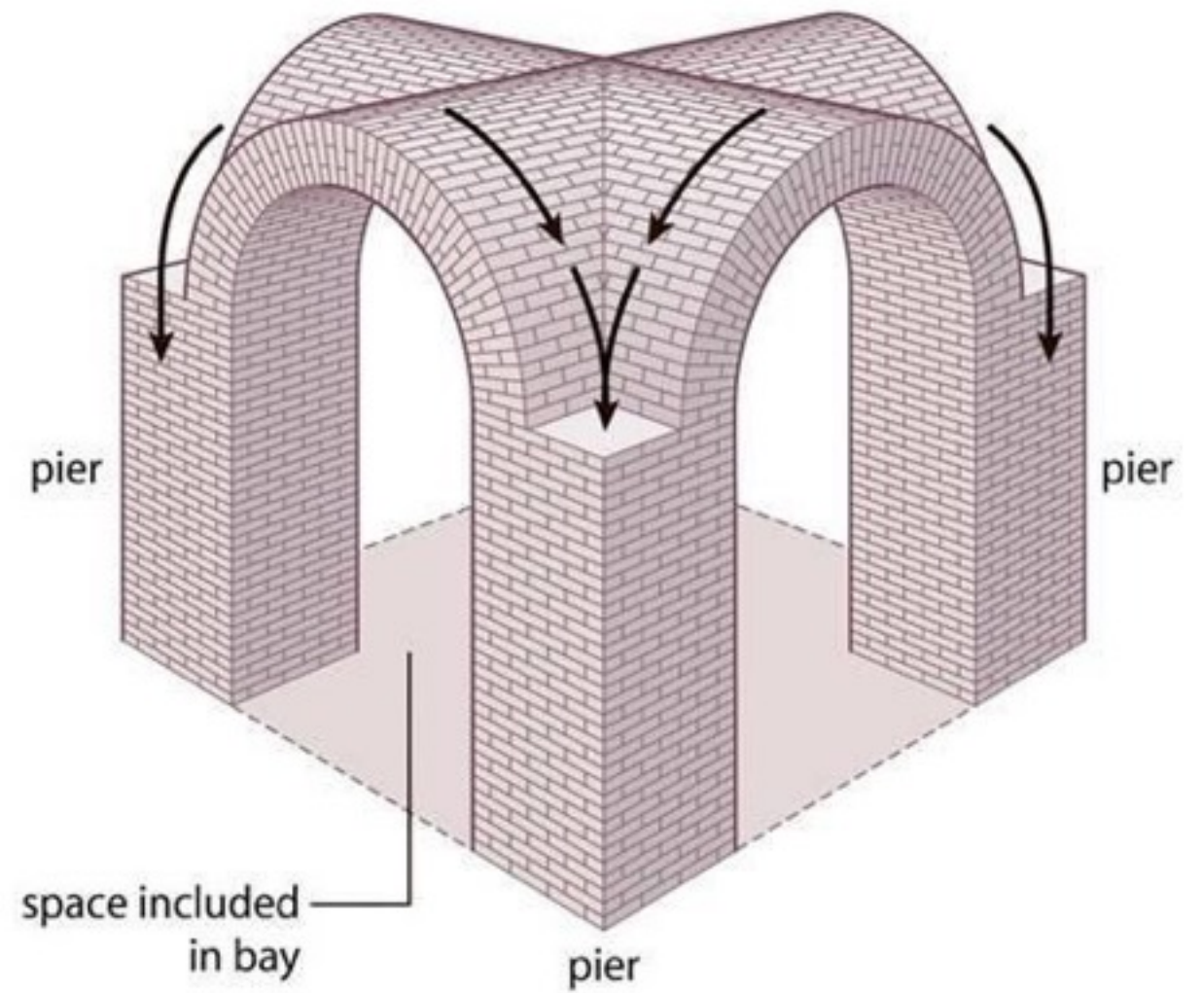


true arch





barrel vault



groin vault

Architecture through the Neolithic Age is ***Second Nature***

~ however ~

In the Neolithic and Bronze Ages, architecture begins to take on strong architectural features beyond just the capacity of dwelling, such as programmatic ritual meaning and symbolic significance - becoming a place of reverence and memorialization of the dead and the ***marking of human memory...***

First, some great new words...

cairn — burial mound of stones (and earth) British Isles

dolmen — two megaliths trabeated by a capstone - burial

menhirs — raised stones

orthostats — vertical megaliths revetting the lower cella

poché — the material in arch. diagrams separating spaces

revetment — sloping retained wall reinforced w stone

trabeation — post and lintel structural arrangement

trilithon — a dolmen arrangement (tri meaning three)

tumulus — burial mound of mostly of earth (and stone)

vernacular — building based on local needs, availability
of materials, and tradition - rather than on professional
or academic criteria



Monumental Sites in Neolithic Europe

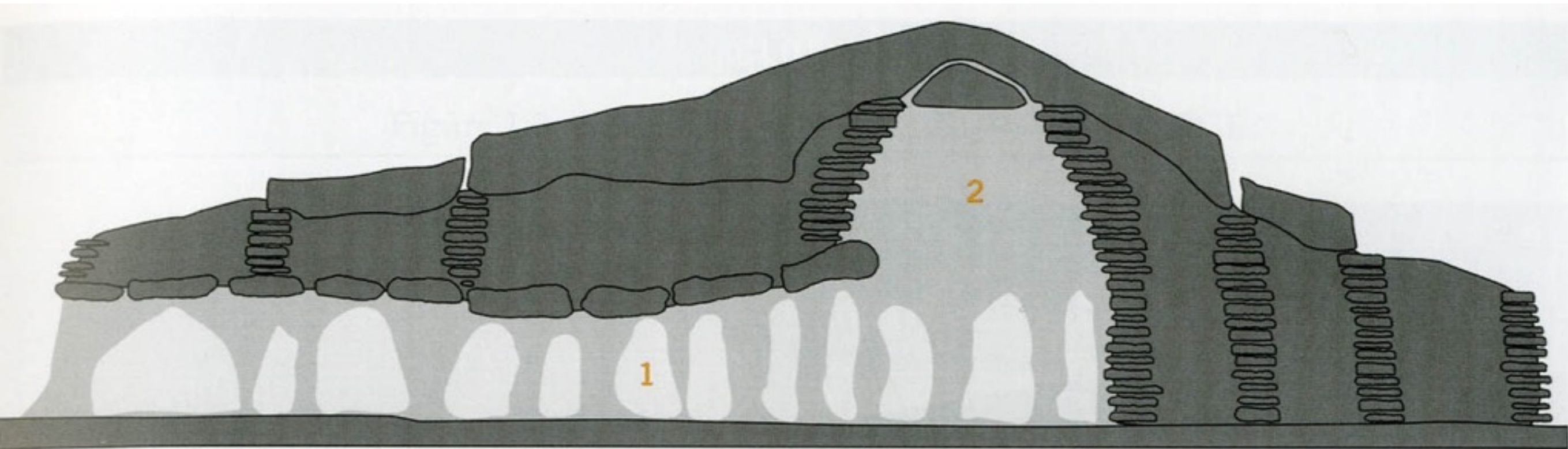


Figure 1.3-4 Barnenez, France. Section of a typical cairn tomb, ca. 4500 BCE, showing (1) main passage lined with raw megaliths, and (2) the central tomb space made with a corbel vault and closed with an immense capstone.

Cairn (tomb) **Barnenez, France - 4500 BCE**



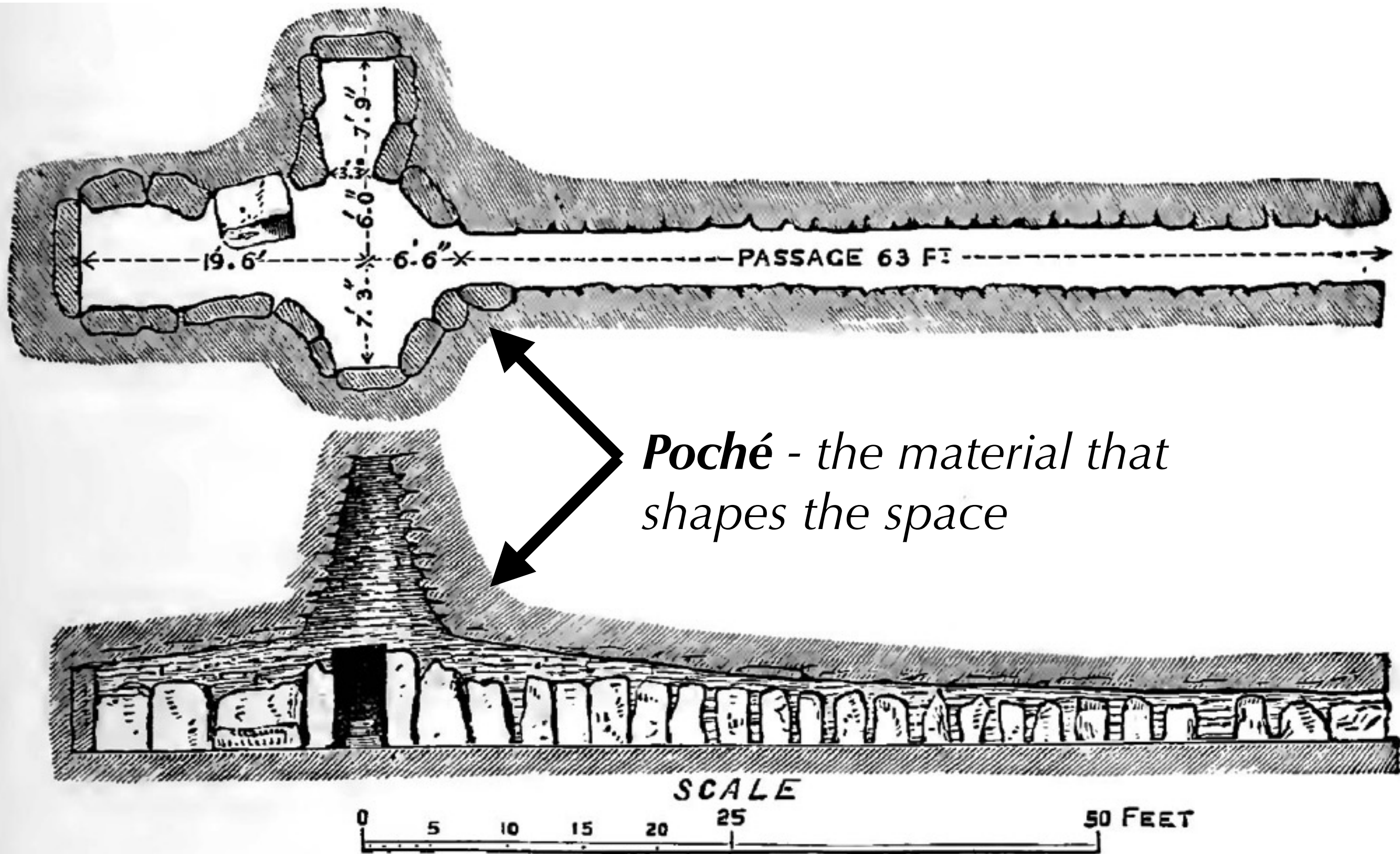
Figure 1.3-3 Bisceglie, southern Italy. Chianca Dolmen, ca. 4000 BCE.

Dolmen - 4000BCE



Figure 1.3-2 Carnac, Brittany, northwest France. Aerial view of Le Menec alignments, ca. 2500 BCE.

Carnac, France - field of *menhirs* - 2500 BCE



Plan and Section of Chamber in Newgrange Tumulus.

Newgrange

A great ***cairn*** employing orthostats, a public space,
a decorated, designed entryway, sacred spaces inside...
a ***proto-temple***



Newgrange, Ireland - 3000 BCE

Newgrange features *shaped space* (sacred space) on the inside yet on the outside it is a designed *object in the landscape*...



Newgrange



Newgrange

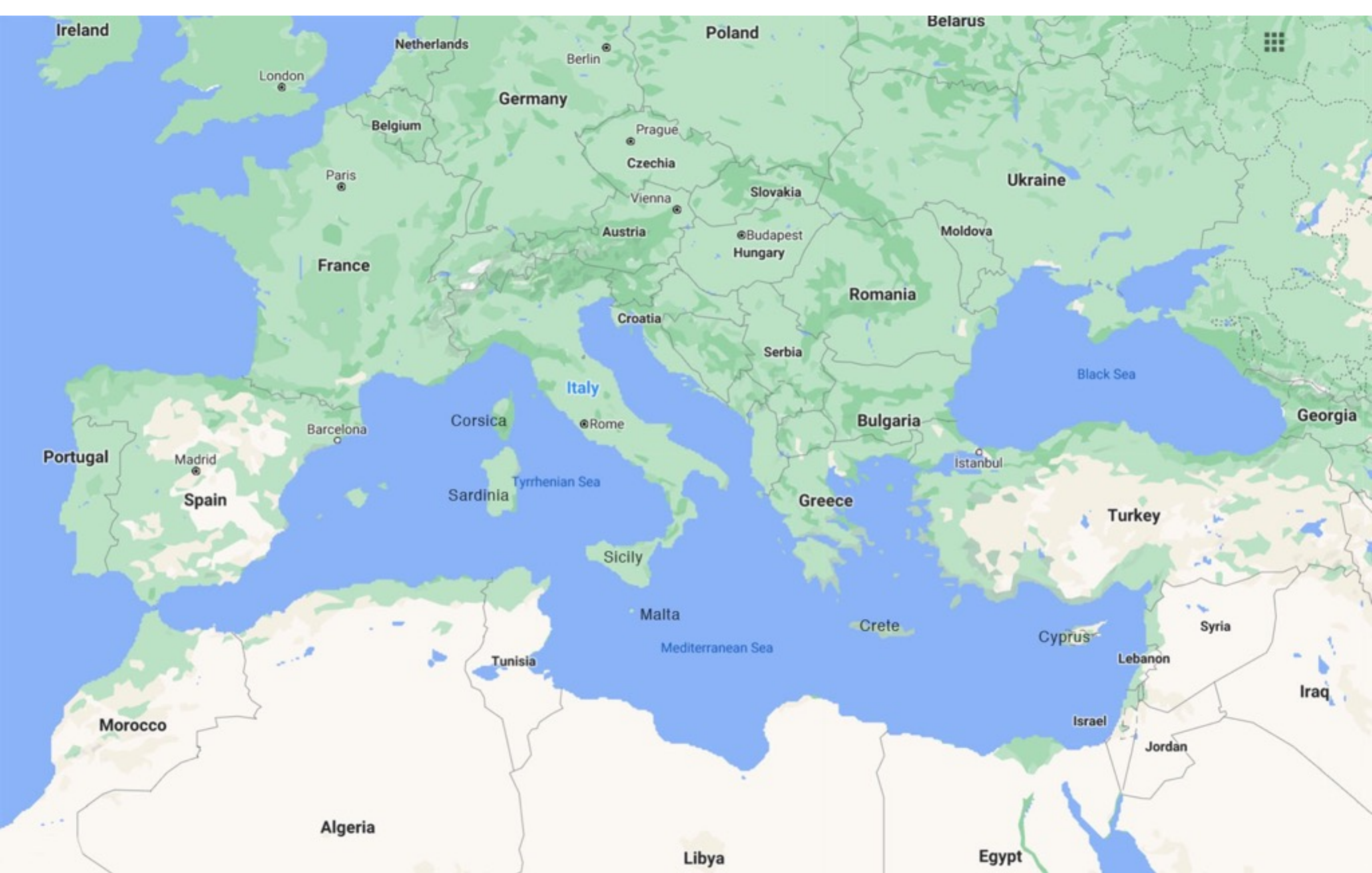


Newgrange



Newgrange

The building of a tomb
takes on the significance
of architecture

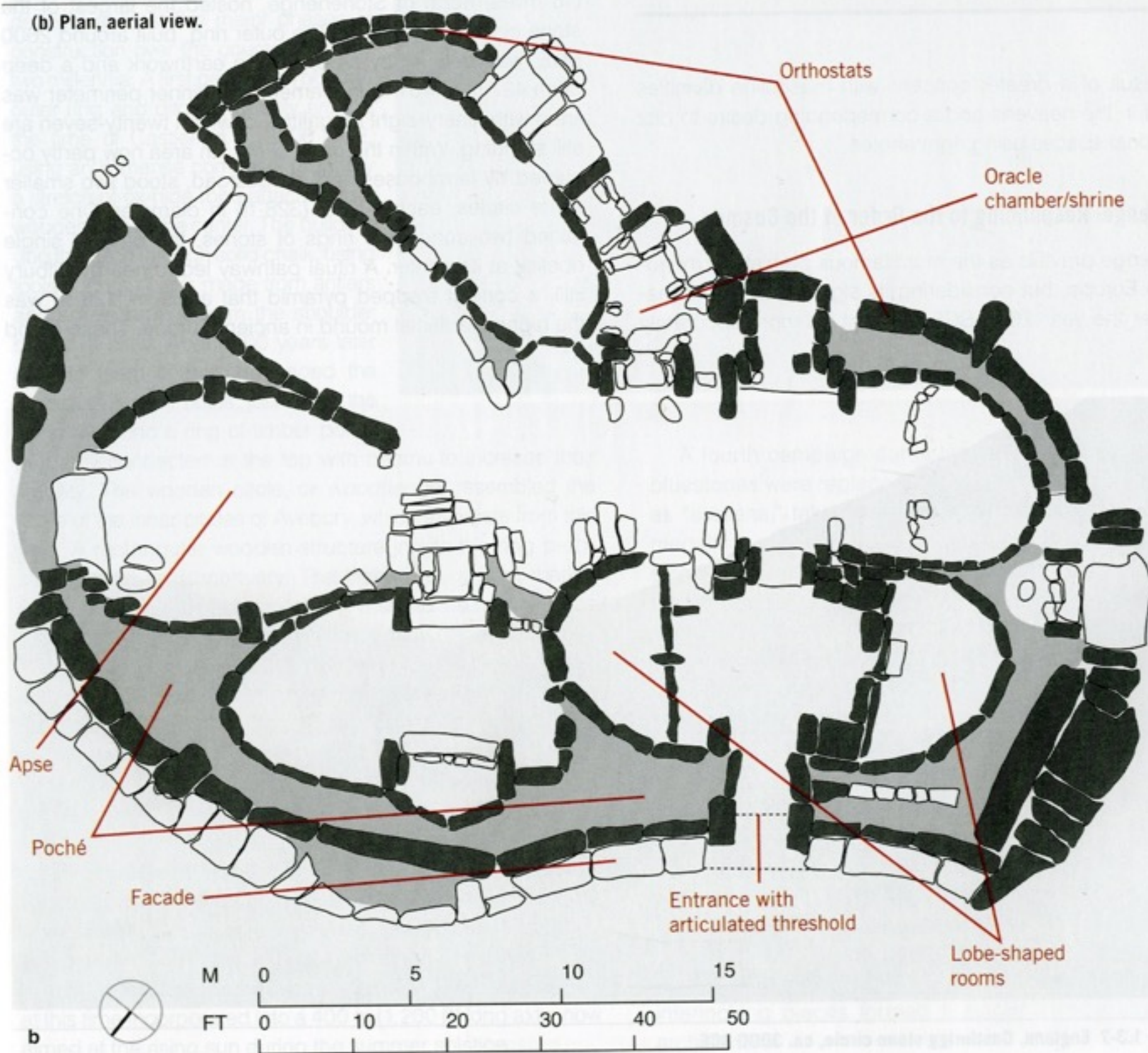


General map of the Med



Hagar Qim, Malta - 3600-2500 BCE

(b) Plan, aerial view.



Hagar Qim

Memorializing
the dead

Promoting
fertility

Helping the
infirm

Sanctuary



Figure 1.3-7 England. Castlerigg stone circle, ca. 3000 BCE.

Castlerigg - 3200 BCE

42 stones on a treeless moor up near the Scottish border



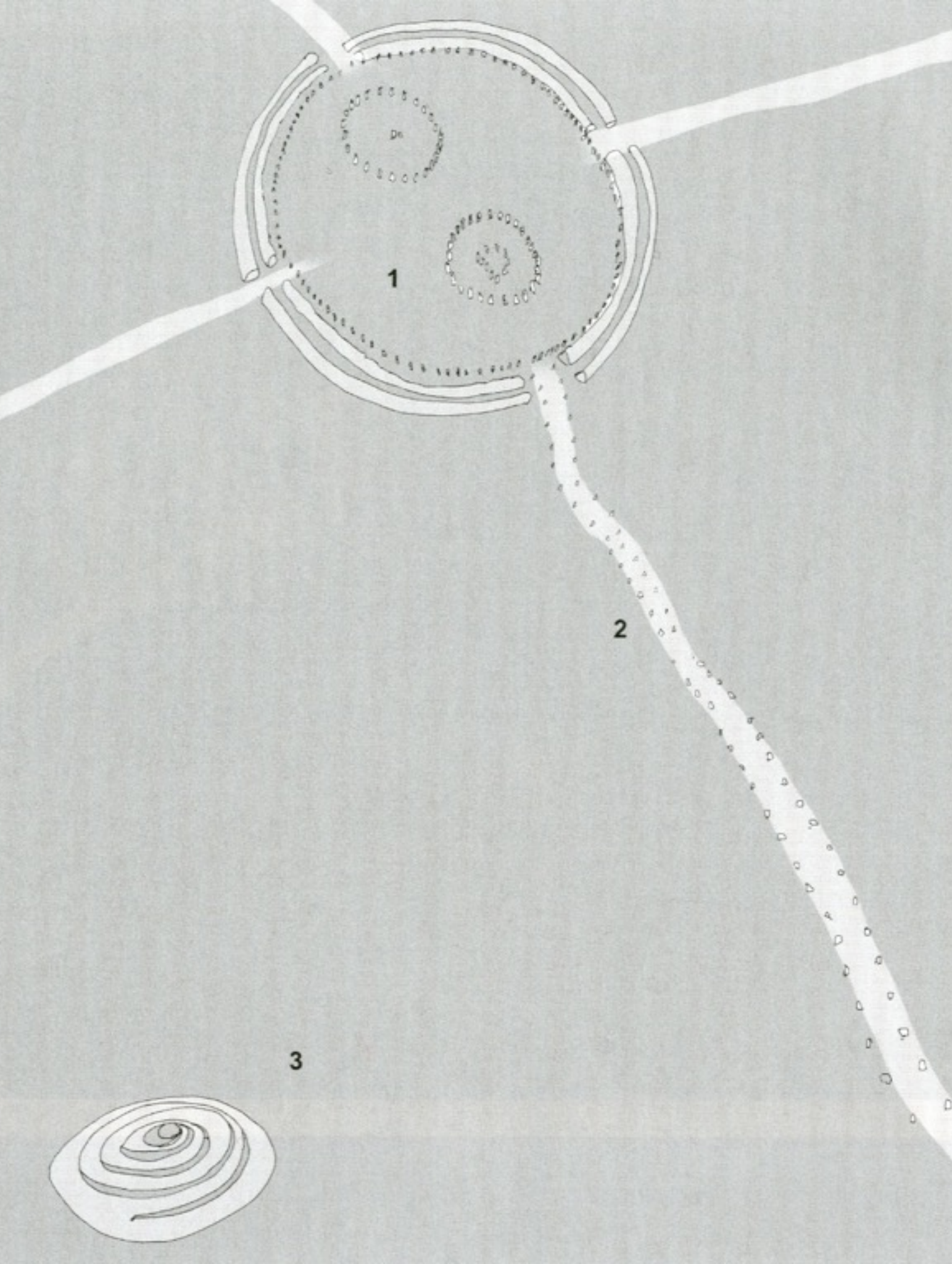
Castlerigg

3200 BCE



Castlerigg

3200 BCE



Avebury, England
(Near Stonehenge)

3000 BCE

A distinct and seminal transition from beyond memorialization (of graves) to understanding and corresponding to the cosmos

Silbury Hill largest man-made mound in ancient Europe

Too tall and large to be simply memorialization

An aerial photograph of the Stonehenge megalithic monument. The central structure is a circular arrangement of large, grey stone blocks on a sandy patch. It is surrounded by a circular ditch and an outer ring of smaller stones. A light-colored path leads from the bottom right towards the monument. The surrounding landscape is a vast, green field with some darker patches and small groups of people scattered around for scale.

Stonehenge - 3000-1500 BCE
Salisbury Plain, England

Etymology:

Stane-Heng (Stone Precipice)

Purpose:

- > Began as a burial site
- > Evolved into a temple-like structure
- > Finally a structure linked to cosmos



Stonehenge - 3000-1500 BCE



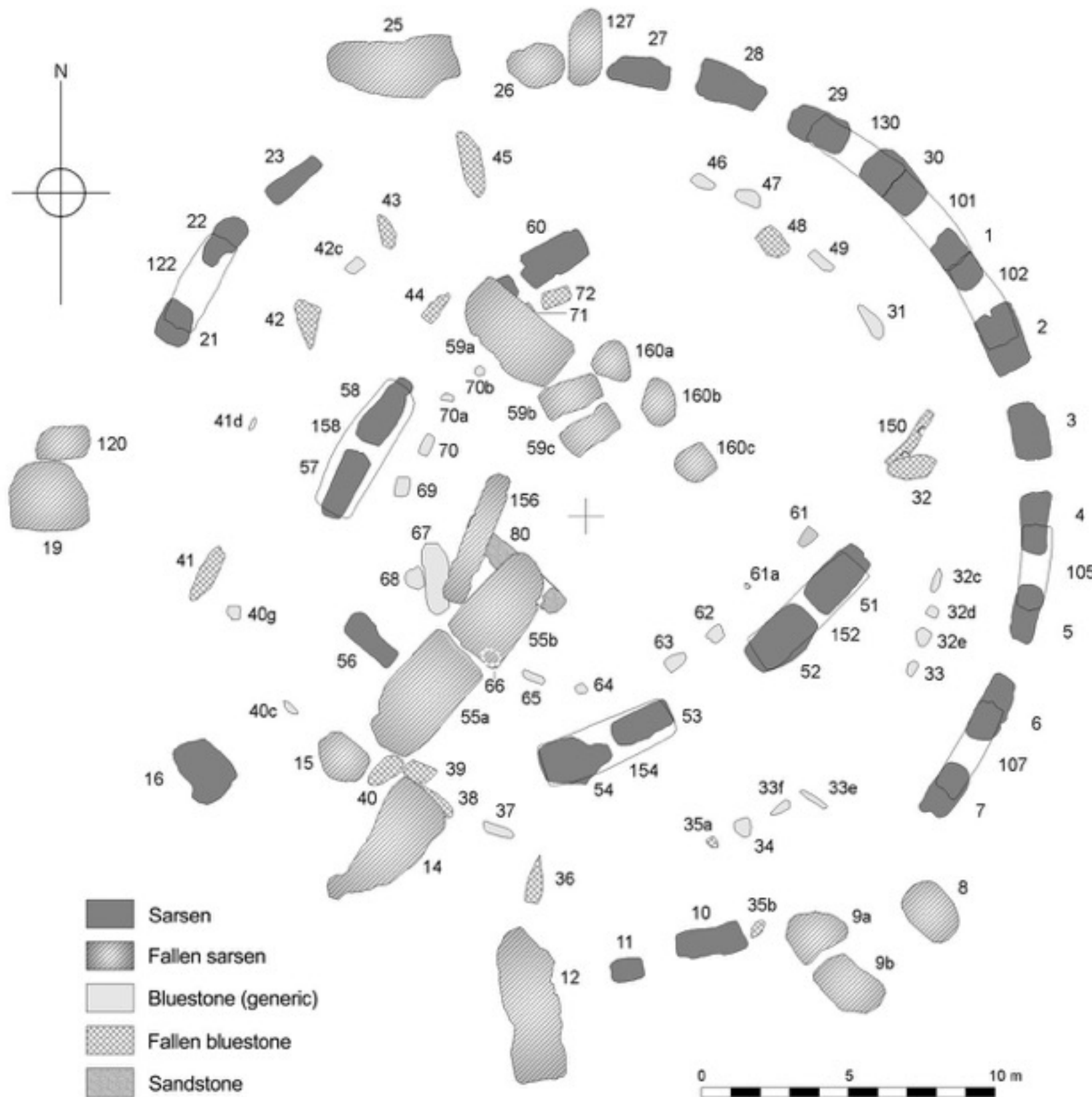
Stonehenge - 3000-1500 BCE

Stonehenge

Archeological diagram of site

A ring of 30
sarcens (sand-
stones) with a
horseshoe of
trilithons aimed
toward heel-
stone

Original circle
maybe 60 sarcens





Road

Outer scarp

Ditch

Bank

North Burrow

Site of Second
Heel Stone

Heel Stone

Avenue ditch
and bank

Avenue bank
and ditch

Station
Stone

Station
Stone

Station
Stone

Z Holes

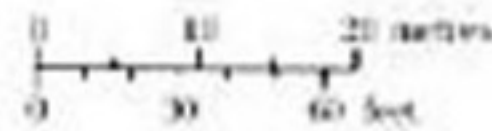
Y Holes

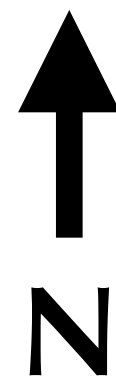
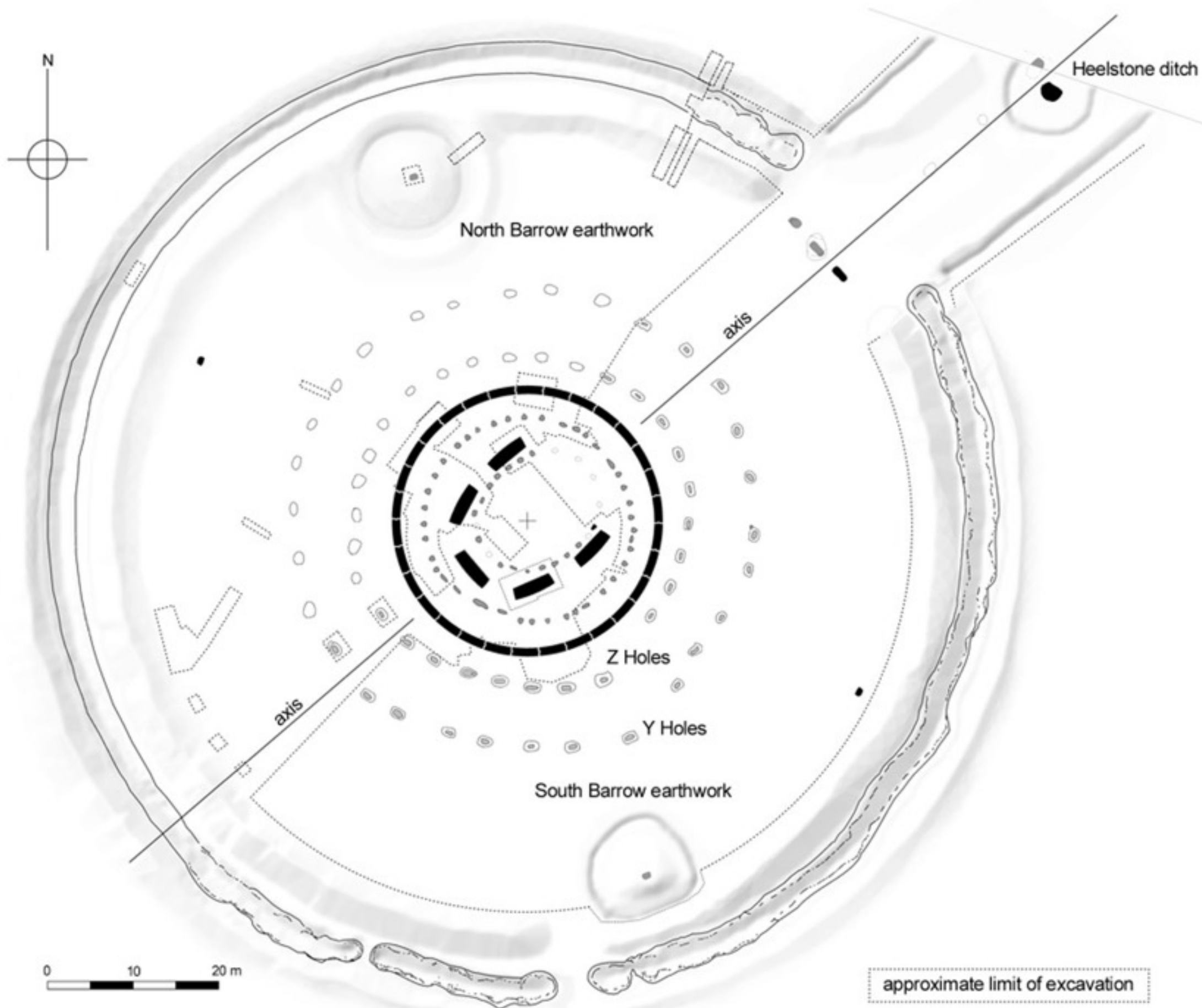
South Burrow

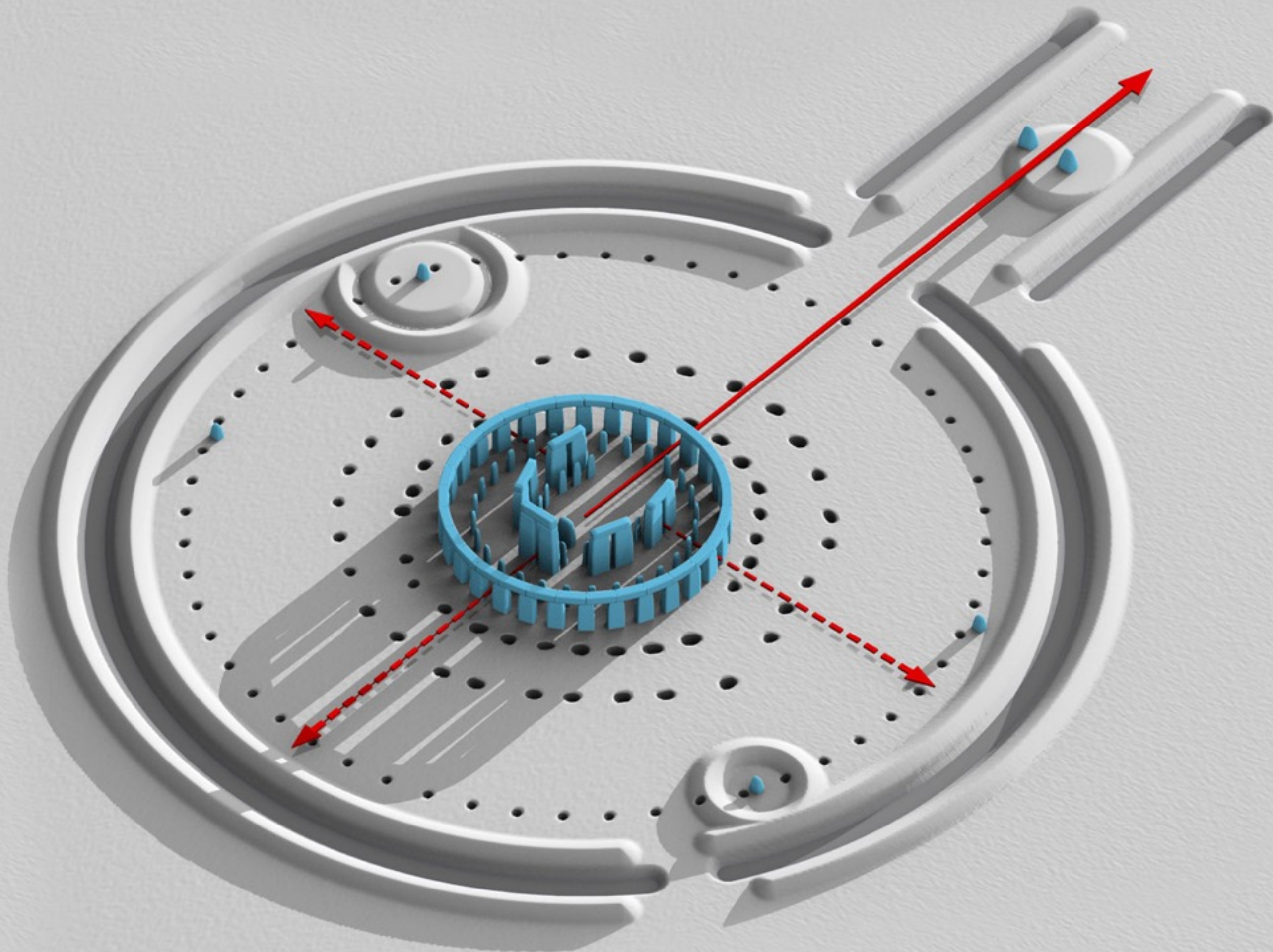
Antey Holes

Bank

Ditch

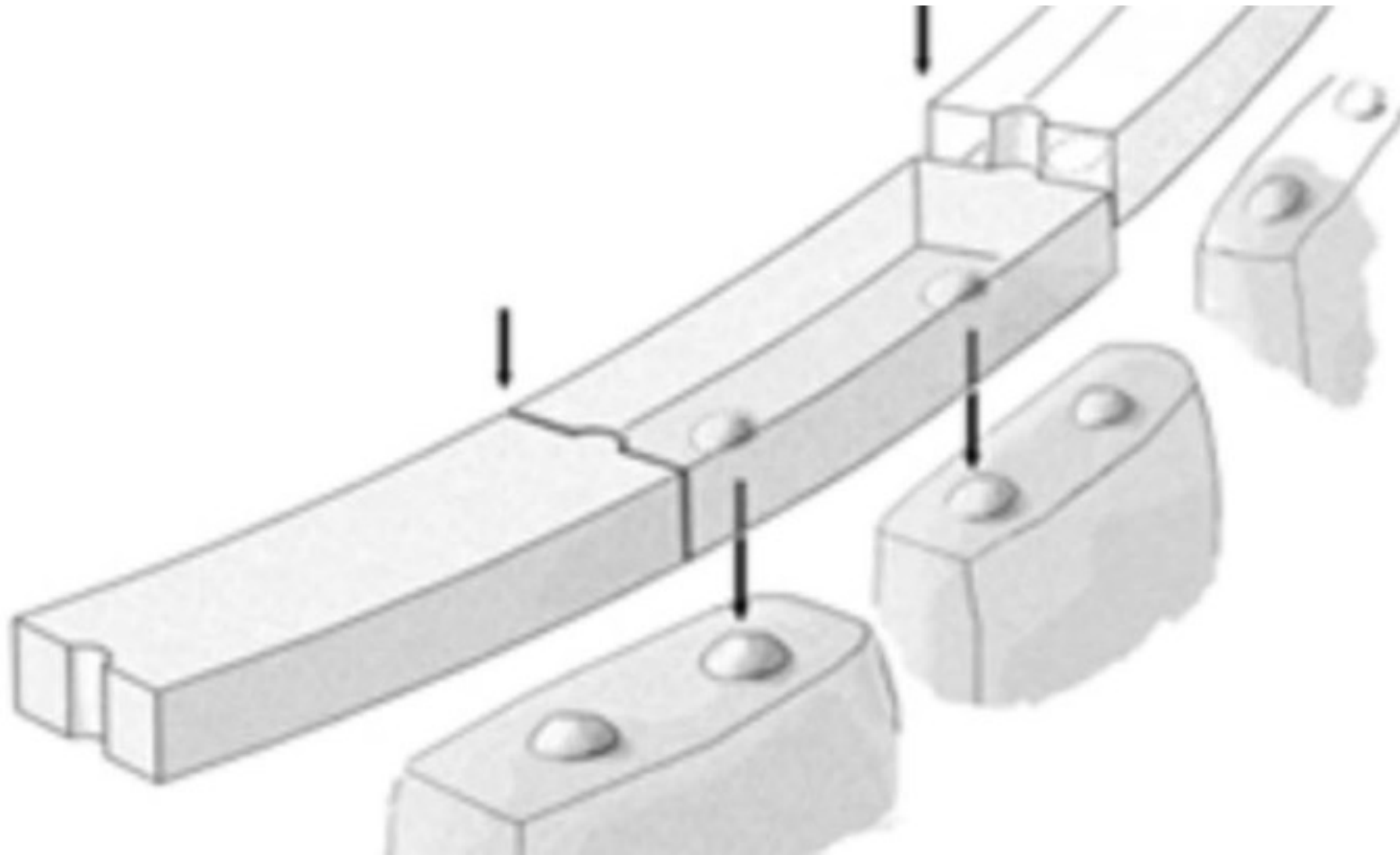








Stonehenge - 3000-1500 BCE



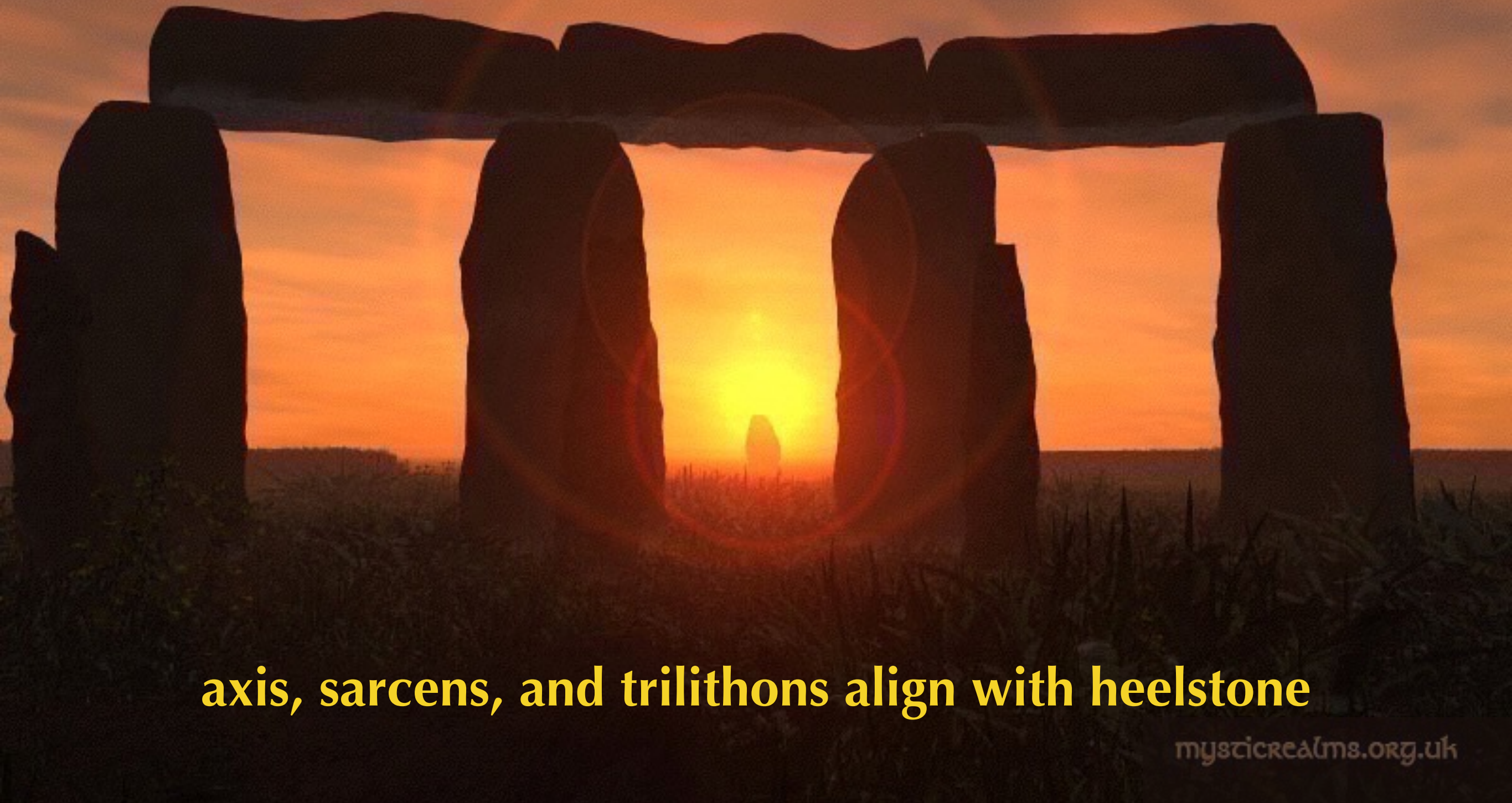
- > Sophisticated joinery using mortise / tenon
- > Curved lintels
- > Finer surface on inside than on outside





Stonehenge's final role was as a temple that expressed a certain authority and power through its rebuilding

Sunrise on Summer Solstice



axis, sarcens, and trilithons align with heelstone

Short movie about moving huge stones